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ABSTRACT

A series of opinions on many facets of the administration of cooperative education programming is presented. Part One reviews the philosophy of cooperative education including Lawrence Canjar's "convert" speech, a comparison of experiential and cooperative education, and discussions of parallel programs. In Part Two employers discuss cooperative education. Representatives of such companies as the Ford Motor Company, Lockheed Aircraft Corporation, and the Chrysler Corporation examine why employers participate in cooperative education, and representatives from such companies as the Detroit Edison Company and the J. L. Hudson Company explain how employers select cooperative students. Recruiting employers and a comparison of students' and employers' needs are the topics of the third section. Administration of cooperative education programs is considered in the fourth part, including some thoughts on cooperative program management, some administrative pitfalls, coordinator responsibilities, a look at liberal arts and cooperative education, and a cooperative education in community colleges. Part Five explores the issue of academic credit for cooperative training experience, and faculty and faculty relations are described in Part Six. The final part surveys trends, wisdom, and information in articles on the evaluation of cooperative education, placement by computer, federal funding, the Cooperative Education Association, the history of the National Commission for Cooperative Education, and the use of veterans' benefits with cooperative education. (PHR)

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FIFTY VIEWS OF
COOPERATIVE EDUCATION

*A compilation of notes of the faculties
of the several Institutes on Cooperative
Education Administration conducted during
1972-78 under Title IV-D and Title VIII
Cooperative Education, and Title V-E, EPDA,
Grants from the U. S. Office of Education,
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Third Edition - September 1975, June 1976
Fourth Edition - April, 1978

To

Clement J. Freund

*Emeritus Dean of Engineering
University of Detroit*

*A pioneer in Cooperative Education
whose leadership and inspiration
have touched most of us*

FOREWORD

During 1972-78, the Midwest Center for Cooperative Education at the University of Detroit conducted 44 short-term Institutes on Administrative Training in Cooperative Education. Twenty-three of these were at Detroit and twenty-one on the campuses of other institutions including California Polytechnic State University, University of Iowa, Pennsylvania State University, University of the Pacific, University of South Florida, Virginia Polytechnic Institute, University of Washington, University of Wisconsin, and Chaminade College in Honolulu. The faculty was drawn from leading cooperative education colleges and from major business, industrial and governmental organizations participating in Cooperative Education. "50 Views" is a collection of the most significant faculty contributions to these Institutes as well as the greatest collection of expertise in Cooperative Education ever assembled.

Presented as a collection of beliefs, "Fifty Views" covers many facets of the administration of cooperative education programming. It was intended, and the intention was fulfilled, that there would be differences and even strong disagreements among the contributors. It is these diverse opinions that makes the "Fifty Views" worth reading and further confirms that the most effective programs of cooperative education are those which are planned by each college in terms of its purposes, resources, and kinds of students served, and in cooperation with employers.

Ralph Tyler, the noted educator said in 1961, *"When cooperative education is treated as a basic concept for relating theory to practice in education, and when flexible arrangements and varied procedures are evolved, rather than a rigid set of operations, the resulting program is more likely to become a very successful one."*

The Fourth Edition of "Fifty Views" contains several new views and revisions of old views from contributors who suddenly found their presentations in print. However, most significant is Larry Canjar's famous "convert" speech. He had given this several times during the three years preceding his death, but he left no notes. He apparently gave the talk each time without any preparation because he had lived the experiences he describes and they were very real to him. We kept hoping that somewhere, someone had taped the talk, and finally we discovered a recording in Arkansas.

ROBERT AULD, Dean Emeritus of Cooperative Education at Cleveland State University edited the First Edition and organized the presentation. JULIE ESPINOSA, formerly Professor of Education at the University of Detroit, edited the Fourth Edition. We gratefully acknowledge their contributions. Special acknowledgement is made to LORETTA KLOSTERMAN who has spent many tedious hours preparing the typed copy of the manuscript.

Donald C. Hunt
Editor

Detroit
April, 1978

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PART I. PHILOSOPHY

My Conversion to Cooperative Education

LAWRENCE N. CANJAR*

I am a convert to cooperative education and that is why I was invited this evening. I am going to talk about cooperative training from the academic point of view. I think really what they want me to do is to talk about my conversion, and this I enjoy doing.

You have to understand what kind of school I came from--Carnegie Mellon. I spent 25 years of my life at Carnegie Mellon. I started as a freshman and left as Associate Dean of Engineering. As Associate Dean my first freshman class had an average college board score of 720, so you have some idea of the kind of students we attracted. The faculty were all renowned scholars working in that tradition of taking really fine minds and exposing them to as much theory as they possibly could, and then giving them to the world and saying, "Here are the perfect products of a perfect school."

I took the job as Dean of Engineering at the University of Detroit because it looked like it was a challenging sort of thing. I think if you put yourself in my shoes coming from a place like Carnegie Mellon, Detroit was a challenge--the type of school that had no graduate work, that had a faculty whose strength was really in practice rather than in research--and I really didn't know the caliber of students.

I heard we had a cooperative program at the University of Detroit, and I began to mull around in my mind, how am I going to get the faculty out of that trap? Anybody who would waste his time in a cooperative program--an extra year of professional life that had absolutely no value whatsoever--it would be much better for a student to borrow money and get through school quicker. My first objective was to eliminate the cooperative program.

Before I get into the stories of my experiences at the University of Detroit, let me point out that one of my activities at Carnegie Mellon as Associate Dean was to be a liaison for industry. I always got the same story from industry--they chewed me out every time. They said what bright fellows we turned out, how brilliant they were, how they could solve all sorts of problems, but somehow it took about 6 months to a year to really fit them into the organization. The guys were all sort of mixed up. They didn't know what industry was really about. They were somewhat impractical; they expected somebody to give them a beautiful complicated problem and they would solve it if someone told them exactly what the problem was and what sort of questions had to be answered. The vice presidents and personnel men said you have a great product, but it is not properly oriented.

**Lawrence N. Canjar, Dean of Engineering at the University, died suddenly on Monday, November 6, 1972. Dean Canjar made this presentation October 23, 1972, at the Cooperative Education Institute held on the Colombiere Campus of the University. We are indebted to Audrey Thomas of John Brown University for providing the tape of the speech.*

When I first came to Detroit, the first thing I wanted to do was to go to industry because one thing industry always told me was "You guys in education do as you damn well please and you never check with us." If I was going to turn Detroit into one of the top-notch schools in the United States, I would need to get industrial input. I realized that Don Hunt had contact with the principal engineering activities in Detroit so I asked him to take me around. Instead, he made appointments for me with 25 vice presidents of engineering, chief engineers, project directors, and other principals. To my surprise, he suggested that I go alone so that he would not personally influence their opinions of Detroit graduates. My first surprise was the magnitude of the engineering operations and the quality of the activities--I had not realized what I now know--that nowhere in the world is there as much professional engineering activity as there is in the Metropolitan Detroit area.

I had heard what was good and bad about the products of Carnegie Mellon and now I wanted to hear what employers wanted from Detroit. Surprising to me was the universal satisfaction by all the employers I met. They readily welcomed the caliber of graduates that Detroit produced. Even in the sophisticated engineering facilities which I visited, Detroit graduates were excelling. They praised us for our cooperative program and what a fine job we were doing turning out engineers, who not only had degrees, but knew what industry was about and what they wanted to do in industry.

I tried to disregard much of the glowing responses, but I could not totally ignore the highly favorable image industry had of University of Detroit engineers. It was really a surprising experience for me to find a school that had students with college board scores 200 points, on the average, below Carnegie Mellon students who really impressed their employers when they went to work. I didn't quite understand that. I decided that maybe there was something to cooperative education after all, which I knew nothing about, and I had better tread easy before I got rid of this kind of a program.

The next experience I had was when Dean Gerardi and I were looking at some of our freshmen and I noticed some of them had college board scores as low as 450. I told Dean Gerardi "We just can't take these students with such low scores." He looked at me and said "You are out of your mind. Some of these kids are going to graduate and are going to do very well." I challenged him on that. We looked over the current graduating class and traced back to find out what kind of scores they had when they were freshmen and indeed a sizeable number of the students had extremely low college board scores and somehow they were quite successful in industry. You know, this took me back a little bit, too.

Just before I left Carnegie Mellon I had taught a thermodynamics class to 90 juniors. There was a thermodynamics class of 90 students waiting to be taught at Detroit. Here was a whole class of students with college board scores 200 points below the one I had just left in Pittsburgh. I taught the class, every quiz was the same, it was given exactly the same week of every semester, every homework problem was the same and they were graded in the same way. There were four quizzes and a final examination, which is a considerable amount of

testing for a course like that. And to my utter amazement...I can say that there was no significant difference in the two classes. As a matter of fact, the students at U of D were 4 points higher out of 100 than the students at Carnegie Mellon. This was a shocking experience but in the process of teaching the course, I began to suspect that this was going to happen.

My third experience involved an electrical engineering honorary fraternity which asked me to give them a lecture on leadership. I thought, "What am I going to tell these guys about leadership? This could be a deadly experience, giving a talk on leadership." We had this session in my home. I broke open a couple cans of beer for the boys and we relaxed. I said, "Before I get into my discussion on leadership, let's find out if you ever met any real leaders." Here were students who had two cooperative experiences and they began to ask themselves if there were any leaders where they worked. One student said he had a real leader and began to describe some of his characteristics, and another said "You know the funny thing about leaders in industry is that they don't get very far." I said, "That's strange; what do you mean they don't get very far?" He said he knew this bright guy who didn't get promoted. There was this guy who wasn't too sharp, but he got promoted over this leader. I began to ask what were the characteristics of the guy that got promoted. "Well," he said, "He sort of gets the work out, he cracks the whip, and somehow he didn't dawdle over a problem for 3 or 4 months like this real bright guy did." They began to realize that the person they were admiring was the bright guy, not necessarily that he ever did anything. Which guy does the most good for the company and does what the company expects him to do? Did the company tell everybody what they expected them to do? The answer came back, yes, it was perfectly clear to them what they were supposed to do and the bright guy probably wasn't doing what the company asked him to do. He was sort of sitting around being very cynical about the company objectives. All of a sudden it occurred to me that in this discussion in which I did not lecture and in which these students compared notes with one another, they had observed real leadership and they observed what the world wanted of them. Somehow in that living room, after about two hours of conversation and sharing experiences, they thought it out themselves. There was nothing I could teach them; they already knew it.

Needless to say, I became a real convert to cooperative education. By this time I had no intention of dropping the cooperative education program. It became obvious to me that cooperative education enhances the academic program. My teaching thermodynamics was more vibrant, more alive, more exciting, because these students had a reference point that they could base this theory on. Going out on a job you learn something about leadership, something about management. I came out thinking of what I got from talking to the employers-- that there was a smooth transition from the academic world over to industry. In other words, the employer didn't see in the graduates the same problems at the University of Detroit as they saw at Carnegie Mellon. The Carnegie Mellon graduate had trouble adjusting to what was expected of him in industry, but the University of Detroit graduate made a great impression on his boss.

I recommend, obviously, cooperative education to everybody, but

let me leave one thought with you...a lot of people think that cooperative education is simply a way of earning money, of getting students through school; obviously it does that. But if you are really deeply committed to cooperative education, and if you can somehow transmit that to the faculty on your campus, cooperative education can really be the most important part of the students' training or education at the school. We believe in it so strongly at U of D that we have incorporated it into our graduate program. At the graduate level we have a doctorate program in engineering. Doctorate candidates intern in industry. They perform their dissertation on site, working on authentic problems that they find in the industry.

If you develop the kind of a commitment we have at the University of Detroit, I think you will find cooperative education as rewarding and fulfilling as I have, and this is the story of the conversion of Larry Canjar.

Is Cooperative Education, Education?

BERNARD L. HYINK - California State University - 1977

This is a challenging question and its answer is vital to the continuing relationship of cooperative education programs with colleges and universities. Cooperative education is generally defined as a program in which classroom study is combined with a professional work experience. And, unless it can be proved that this work experience is a real learning experience, cooperative education does not belong in an educational institution. Colleges and universities have the responsibility to develop and expand the knowledge of individuals. Faculty members and campus administrators are engaged in academic functions and will evaluate the program of cooperative education in this context. Their support and cooperation is necessary if the program is to succeed. Thus it is essential to demonstrate that cooperative education provides a worthwhile learning experience for the student and thus becomes a part of the academic process.

One of the reasons for the present interest in, and increasing support of cooperative education is that it is good education. As already noted, cooperative education is a program in which classroom study is combined with a closely related work experience--and experience is a good teacher.

There has been, and still is, some controversy over the value of experience as compared with formal study and the accumulation of knowledge. There are those who view experiential learning, such as that which takes place in cooperative education, as a dilution of academic quality. Then there are those who believe that real and lasting learning only comes about through experience.

This dichotomy between formal study and experience, as it relates to learning, is unfortunate. The truth of the matter is that learning occurs both in the classroom and outside the classroom. And as George Santayana expressed it in The Life of Reason, "The great difficulty in education is to get experience out of ideas." Cooperative education

combines formal academic study with a related work experience, and thus achieves the best of two worlds. The basic idea behind cooperative education is to integrate education into the lives of people. Students in this way can work and live among the people as they complete their college education.

True cooperative education in all academic areas at the college level is most effective:

1. When the student's work experience is directly related to the field of study in which the individual has a major interest.
2. When the college or university awards academic credit for the student's work experience. The internship or co-op experience is offered as a course within the curriculum of the department under the guidance of a member of the faculty.
3. When minimum standards of work and performance are maintained by the educational institutions and the employers. The student's work is periodically evaluated by the employer, the university, and by the student.

By the awarding of academic credit, the college or university formally recognizes that cooperative education is education. In this way the college certifies that the working experience is an integral part of the academic program. This work experience is evaluated and a given number of credit units is assigned. Thus, student enrollment in cooperative education adds academic units toward the total full-time equivalent enrollment of the institution. This is particularly important to public colleges and universities where budget allocations are based upon the number of full-time equivalent student enrollments.

Probably the most convenient and appropriate way to award credit for the cooperative work experience is to establish courses for this purpose. These credit courses can be offered within the curriculum of a given department or school, or can be included for general credit towards a degree. When the working experience is directly related to the student's major, the co-op or internship course should become one of the departmental courses and offer credit for the degree in that academic discipline. This places the working experience on an equal footing with all of the other departmental offerings and recognizes the co-op course as an integral part of that particular educational program. Some departments and schools include the internship or co-op course as a requirement for the degree.

As with all other courses, the department assigns a member of its faculty to the co-op course. It becomes the duty of the instructor to counsel with students and with the employer-supervisors in the implementation of the work experience. The faculty coordinator may wish to hold periodic meetings with all of the students enrolled in the course to provide an opportunity for the interchange of co-op experiences and to give general instructions concerning the internships. The faculty coordinator should also make on-site visits with the student and the employer-supervisor. The faculty member also has the final responsibility to review and evaluate the reports of

the employer-supervisor and the student before awarding the grade for the course.

When the work experience receives college credit, the student knows that the time and effort spent in the co-op assignment counts towards the college degree. Under these conditions the student's incentive to participate in cooperative education is increased. And as a result, the competition for co-op working assignments is greater, thereby improving the general quality of students in the program.

Alvin Toffler, the futurist, in Learning for Tomorrow: The Role of the Future in Education, emphasizes that most educators fail to recognize that the acceleration of change means the swift arrival of a future that is radically different. In seeking viable alternatives to the traditional educational environment he accentuates the need for off-campus, out-of-the-classroom "action-learning" accomplished through participation in real work, in business, in community political organizing, in pollution control projects, or other projects. He feels that "action-learning" enables the motivation for learning to change. It is essential that we provide an educational environment which would assist learners to cope with real life crises, opportunities, and perils.

Cooperative education blends theory and practice, and is explicitly concerned with the development of competencies as well as knowledge. The combination of action-learning with academic course work creates a powerfully motivated and powerfully personal learning situation. Students are given an opportunity to test various work experiences with academic interests and career aspirations. Thus in a real sense, cooperative education is non-traditional education. It certainly fits well into the definition given by the Carnegie Commission on non-traditional study: "Non-traditional study is more an attitude than a system.....This attitude puts the student first and the institution second, concentrates more on the former's need than the latter's convenience, encourages the diversity of individual opportunity rather than uniform prescription, and de-emphasizes time, space, and even course requirements, in favor of competency and, where applicable, performance."

There is ample evidence to show that cooperative education is education. It is a program that offers an expanded dimension of the total education received by students at colleges and universities. Applied learning gained through the professional work experience, integrated with classroom study, supplements and reinforces the academic content of the curriculum. Cooperative education offered as a credit course under the direction of a qualified faculty member provides a complete education for students. Yes, cooperative education is education. As such, it is worthy and deserving of the full support of the faculty and the administration of our universities and colleges.

"Cooperative" - "Experiential" - Are They Really Different?

E. R. PETTEBONE - Indiana State University - 1977

The term, "Cooperative Education", is quite venerable now -- it is something like seventy years old in its application as we know it today. I intend to avoid meticulously any attempt at defining that term. Its general meaning is well recognized; the fact that you are reading this book is evidence that you have your own concept of the relationships it implies among students, educational institutions and the employers involved. The concept at hand has to do with the relationship between classroom theory and its application outside of the classroom; co-op is a methodology for implementing that concept.

In making that distinction I intend no deprecation of co-op as it is generally conceived. Ten years ago co-op required a very rigid relationship among student, institution and employer. There was very little variation permitted to the structured alternate-term arrangement; and in many cases today there is still zero tolerance for any pattern that strays from that prescribed rigidity. But there are variations creeping in that recognize that co-op does not have to be that inflexible. Employers and students alike are finding that there can be variations on the old theme that can be effective in relating theory to practice. Even the Congress of the United States recognized that when it legitimized "parallel" co-op. That was accomplished simply by dropping two words, "- - full-time - -", from a legislative definition; so co-op on a "part-time" basis is now permissible from the legislative point of view.

However, that may be nothing more than semantics. There are now three very prestigious postsecondary institutions running co-op on a year on/year off basis. There are some very valid arguments for such a schedule as it avoids unnecessary repetitious offering of small classes, and that has a significant "bottom line" payoff. But the concept is still the same whether we talk about year on/year off, semester on/semester off, quarter on/quarter off, six weeks on/six weeks off, day on/day off, or morning on/afternoon off. Many professionals find some of these patterns to be acceptable while others are not. Some preferences may be based on the energy requirement inherent in the particular co-op pattern. The co-op coordinator's energy output seems to have an inverse relationship to the length of the work term--the longer the term, the less total energy required. That goes for all but parallel co-op, for such a co-op placement can actually last for two years or more. And there are some disciplines that will not fit certain co-op patterns. Manufacturing supervision, for example, simply does not go with parallel co-op; that discipline normally relates to manufacturing operations which function on eight-hour or ten-hour shifts that do not lend themselves to part-time participation. But a day on/day off pattern could be made to work for such academic majors.

The largest professional society in this field, the Cooperative Education Association (CEA) was formed in 1963

"TO ASSOCIATE. . . all persons - - whose aims are to elevate the standards of cooperative education so these programs will best

serve the student, the employer and the college.

TO OBTAIN . . . the best thinking on the many problems of this highly specialized field and to share such information.

TO PROMOTE . . . the broad general aspects of cooperative education so that as many as possible may know of its benefits.

TO INSURE . . . that cooperative education takes its rightful place in the circles of higher education."

CEA's position is that the co-op " - - experience is meant to enhance the student's self-realization and direction, and will provide cultural learning situations outside of the classroom environment. If possible, the student's work should be allied to his field of study--."

Now look at the newer Society for Field Experience Education (SFEE). Its stated goals are

"To assist in the creation, promotion and evaluation of programs in field experience education.

To help improve the content and structure of field experience programs.

To move for the acceptance of such programs as an integral aspect of American education."

SFEE's " - - membership includes persons involved in cooperative education, work-study programs, public service internships, service-learning internships, cross-cultural learning experiences, pre-professional, voluntary activities and other forms of off-campus education."

On the basis of these stated purposes and involvements, it appears that the CEA and the SFEE are very close together as far as concept is concerned, although their implementing methodologies may differ widely. "Co-op experience" is paid experience; "field experience" may be paid but is usually unpaid experience. Co-op is repetitive while field experience tends to be singular. Regardless of these differences both approaches talk to that "raison d'etre" for all of us in education: to help students succeed through a better education.

For the most part, co-op seems to fit the needs of the technical and scientific disciplines--engineering, technology, the sciences, mathematics, computer science, accounting, marketing, etc.; field experience seems to fit best in the liberal arts and related areas. But even that is not a safe generalization, for considerable overlapping and intermixing are beginning to appear. Take, for example, the newly-created Indiana Center for Experiential Education (ICEE). This is a voluntary alliance of 20 to 25 public and private colleges and universities in Indiana that have joined hands, with the blessing of the State Personnel Division, in order to more effectively develop work experiences with the various state agencies. Some of ICEE smacks of co-op: the state looks at it as a recruiting mechanism, the experiences are all paid and some may be repetitive. Some of it looks more like field experience: the work experiences are "internships" (the term is more comfortable and familiar from the agencies' point of view) and, at least at the outset, most will be singular in nature. Here is

an outstanding example of how imaginative and aggressive leadership has created a coalescing of the strong points of differing methodologies to best serve the needs of the educational institutions and their students, and the State of Indiana.

Here at Indiana State University our Cooperative Education/Experiential Education program is aimed at helping students succeed by providing opportunities for them to apply classroom theory in a work environment. We use alternate co-op and parallel co-op when they are the best patterns. We use summer-only co-op when that is the appropriate fit; and we use fall and spring semester co-op with elementary and secondary school systems. Internships, some optional and some required, are built into the co-op patterns when desired. We also use singular experiences when the experiential values merit such a pattern; and on occasion we will go with an unpaid experience on an "exception" basis. This is more than co-op and more than field experience; like the Indiana Center, it is an amalgamation of the best of both worlds. Our umbrella term for this range of work experience is Cooperative Professional Practice; that, we feel, covers the full range of work experience patterns that our students have a right to expect.

I find no conflict between Cooperative Education and Experiential Education. They have a common concept and offer a variety of implementing methodologies. To me, the term "Experiential Education" is the broader term within which "Cooperative Education" fits as a specifically structured element. As long as we, collectively, are dedicated to helping students succeed through the addition of work experience reality as part of their basic curricula, we need the broadest possible range of experience expression.

So Cooperative Education and Experiential Education are not really different. They have much in common; what is not common is complementary. We need the whole package.

Co-op: Respect the Classic, Evaluate the Innovative

FRANK VANDEGRIFT - Auburn University - 1975

In spite of much criticism in recent years, past and present experience is proving the viability and vitality of the "classical" or traditional form of Cooperative Education.

On the part of employers, there is increased confidence in this form of education because it is workable, dependable, and has a reliable "track record". Many new programs, innovations, and new ideas about cooperative education have been initiated and are being tried. Some will last...some will not...but this classical form has endured.

What is the future of classical engineering cooperative education? Bright! Alternating work programs will continue because they afford a greater depth of exposure for the student if he remains with the same employer for at least a year of experience. This "dipping process" affects the student's attitudes about work, success, and education, his rate of maturation, and certainly provides many

avenues of career commitments. Surveys have repeatedly shown that employers want alternating programs and like them. In conference workshops recruiters have stated their interest in the extended periods of training which leads to a better long-range recruitment advantage to the student.

The Accreditation of Engineering Co-op Programs by ECPD will eventually pilot the way for other accredited programs. Why? Because it lays down criteria standards, quality controls, and effective techniques about cooperative education. Employers like the accreditation because it affords a consistency across the nation. It gives the students a program in which many heads have pooled their best wisdom--rather than a one-man program here and there trying various techniques and experiments at the student's expense. Accreditation insures constancy of operation even though personnel may change within an institution or company. The non-technical programs will eventually have to develop some accreditation criteria or lose the universal respect of their participants, - students and employers. One step further, - not only will the ECPD Accreditation of Engineering Programs stimulate accreditation for other programs, but it is predicted they will come to resemble the Engineering Programs more and more.

What about innovative techniques? The older programs are generally too structured to consider innovation but all should be encouraged to study some of the fresh, good ideas that are proving successful. Some good effects that have been observed from innovative programs across the nation include exciting promotional techniques. They have even put forth some new, valid reasons for co-oping. They certainly have suggested effective ways to find assignments for non-technical students, - a perennial problem. Anything that makes us re-examine our own procedures is worth considering.

The future probably holds some difficulty for us all regarding the image of the term "cooperative education". With all the new programs, philosophies, and approaches no wonder a general confusion exists about what co-op education really is. The institutions that build quality programs and learn from experience what works best will endure. The rest will fall by the wayside. Quality placement, coordination, counseling of students coupled with good employer relations will spell success. Flashy experiments by schools will not only cheat the student but continue to hurt the whole cooperative education enterprise.

There are many working on academic credit for Engineering Co-op Programs. Even ripples from ECPD on credit for co-op are coming forth. A universal effort should be made to study it and continue to study it. Engineering schools should not wait for the junior colleges and community colleges who supply pre-engineering students in substantial numbers to "pressure" them into reluctant credit offerings. If it is to be done, the way should be found by the engineering schools themselves.

The current situation shows the engineering programs are leading the way in:

1. Employer respect for Cooperative Education

2. Accreditation criteria and procedures
3. Efficient and effective "track" records
4. National influence in many areas of the co-op community and professional societies

...and this influence will grow...

Parallel Programs Are Not Cooperative Education

MAURICE E. HAMILTON - New Mexico State University - 1975

In the beginning, and there is always a beginning, Cooperative Education was set up to alternate periods of full-time work with full-time school and on an organized basis to provide the student with training that one cannot obtain by being employed in a "summer hire" type program. Anything less than that would violate the operating philosophy of cooperative education and the students would derive few if any benefits that would aid them in their chosen profession. However, if one is talking about an apprenticeship program, then we are in the right ballgame.

A program which has become known as the "Parallel Program" does not fit the description for cooperative education as it is nothing more, in most cases, than students who are working their way through college in any type of job that can be found in their specific geographic area. However, the parallel program does fit the need of the student who does not want to delay his graduation date, does not need that much financial support, or who needs only supplemental support the year around; in addition it is the answer for the married student. In fact, for years many placement offices have had specific personnel assigned to finding part-time student employment exactly as a Parallel Program operates without calling it by that name.

In the end, though, the employers treat the Parallel Program and their summer hire employees in a similar fashion. Very few if any companies provide their summer hire (or parallel) with organized learning experiences, but rather, they push off work on these employees that they have no desire to give their full-time employees. It is doubtful, in this writer's opinion, if objective data can be obtained to show any real value in a program such as a Parallel Program. It is felt that with this kind of evidence (or lack of evidence) the legislators neglected to delete the word "full-time" from current Federal legislation.

Parallel Programs Are Cooperative Education

ADA L. SALISBURY - Ashland Community College - 1975

Parallel cooperative education programs, a recent innovation in higher education, are becoming quite visible in ever-increasing numbers. Traditionalists would exclude the parallel program which does not require periods of full time employment alternating with periods of full time school. Those operating parallel programs contend that scheduling is not a significant component of the cooperative

educational process.

It is evident that a great percentage of students in community and junior colleges, vocational-technical schools, as well as universities, seek employment within the service area of the educational institution. With proper administration, many of the employment opportunities can result in a planned educational experience for the student. Very often the training opportunities available require less than a full time employee, thereby supporting the parallel program as opposed to the alternating program. This in no way prohibits the simultaneous administration of the alternating program, as one may serve to compliment the other. The training a parallel participant receives in the off-campus assignment need not be in any way inferior to that an alternating student receives. One supporting element is the progressive learning that is uninterrupted for the parallel participant.

The total hours spent in the parallel work assignment may exceed the total hours spent by one alternating student during equal tenure at a particular institution. Another major factor for students electing the parallel program is that the time necessary to earn the degree need not be extended. At the same time the student's earning power is continuous.

With proper advising and class scheduling, the student who works and attends on-campus classes during the same semester or other time frame can achieve a level of success in both endeavors without short-changing either aspect. To deem that a student must concentrate on all class work or all off-campus assignment is to underestimate the abilities of the student population. Surveys indicate that a great many students have some type of employment during the time they are in the training institution. It is the program director/coordinator's responsibility to move the student into the work environment that is conducive to enhancing his educational objective. This is the essence of any of the various scheduling patterns for Cooperative Education.

The parallel program also has positive implications related to course offerings and class scheduling. Most degree programs have some element of course sequencing, and often the specific courses are only taught once during a given calendar year. The parallel co-op student merely adjusts his work schedule to permit registration in the classes as they are offered. An alternating program may necessitate duplicating the class offerings each semester or else extend the time needed for the student to meet the degree requirements.

The parallel program is highly effective in attracting the business-industrial concern that is new to the co-op program. This is particularly true with the smaller organization/agency. The educational potential of such off-campus assignments should not be underestimated.

If we propose to meet student needs, keeping in mind the limitations of the college or university as well as the needs of the total business community, then it is imperative that options be made available to all concerned. To isolate an approach to cooperative education as being the "only way" to administer an effective program is an

unrealistic assumption. Each individual institution must evaluate the student population and their needs, the capabilities of the training assignments off campus, and the limitations of the on-campus facility. It may be determined that one approach would be more effective than the other, or it may be that both approaches are needed.

One must conclude that scheduling is not the central issue of cooperative education but rather how best to serve the students' educational needs within the framework of the needs and capabilities of the community and the institution. Parallel programming is another and often times better method to meet these educational goals.

Parallel Cooperative Education is Alive and Well

CHARLES H. POLK - Daytona Beach Community College - 1977

According to the New York Times, thousands upon thousands are returning to college for a second undergraduate degree in a new field because of a job scarcity in their chosen fields. We at Daytona Beach Community College feel that a solid Co-op Program can go a long way toward preventing this from happening.

Parallel Cooperative Education contains the necessary ingredients for turning out, for the business and social community, a highly motivated better-than-average student who completes two years of college with what I like to refer to as a "running start."

I believe our Co-op students will continue to turn out to be better qualified in their fields than 100% academic classroom types. In the less than three years that our Co-op Program has been in operation, we see evidence from faculty and students alike that Co-op is contributing highly to classroom motivation and resulting generally in better grades and more selective employment opportunities for the graduating Co-op student.

But, why has Parallel Co-op taken so long to gain acceptance??? We in the community and two-year colleges know all too well the uphill battle we have had to wage together for Parallel Co-op Training Assignments finally to be accepted by HEW as viable "alternating periods of work and study." It took time to prove its worth, to gain acceptance, and it will continue to take additional effort, imagination and flexibility--particularly for those of us working with liberal arts students--to continually seek out Parallel Co-op Training Assignments that are academically-qualified college-level learning experiences.

I believe that several prerequisites must be recognized to establish the viability and academic credibility of Parallel Co-op Training Assignments.

First, the job must be looked upon as a "learning laboratory". Students need a learning laboratory today if they are to get a foothold on tomorrow. Do you have any idea how many freshmen-level

college students do not know how to write a check, compose a simple business letter, lodge a legitimate complaint, or talk intelligently on the telephone? As the nursing and medical student must learn in a hospital setting, what better learning facility for a business administration major than a business office; a marine biology major at a marineland, seaquarium, or ocean world; an education major as a teacher's aide; a pre-vet major in a pet store; a political science major on a political campaign...of course, I could go on and on.

Second, students must not receive academic credit for hours spent on the job, rather academic credit must come as a result of the learning that takes place on the job as it relates to the student's goals or major or minor fields of study.

Third, the faculty involved with the Co-op student must receive recognition. This can be in the form of released time, or financial remuneration for overloads, as we offer at Daytona Beach Community College. However, there are other imaginative ways such as expense-paid participation in out-of-town Co-op workshops, certificates of appreciation, faculty-employer breakfasts and dinners, inclusion of faculty contributions in news releases, broadcast and TV publicity regarding the Co-op Program and Co-op students.

Fourth, I believe that in a fully-committed Co-op Program, Co-op Training Assignments should be available as electives or course-equivalency options in virtually all disciplines in your college or university catalogues. The rationale behind this is clear. As I stated previously, four out of five liberal arts majors entering college out of high school are undecided as to a career choice. The late 1970's are fast becoming the era of the second major. The liberal arts student has begun to take a second occupationally-oriented major to insure his learning capacity while working toward an advanced degree, while interning or as a career alternative. Today, a marketable skill is almost a necessary partner to the student pursuing a degree. Later, I'll discuss with you specific examples of how my Co-op students have fared through their Cooperative Education Training Assignments.

Specifically, if yours is like most community colleges, 50-70% of your students must work their way through college and four out of five liberal arts students are "undecided" on a career. Doesn't it make sense that as long as a student must work, why have a business major slinging hamburgers for Burger King when he could be working in a business office "laboratory" learning procedures that can help him get a running start on his career?

Co-op aids faculty and administrators immeasurably. By its very nature, Co-op has its own regulatory mechanism...fast feedback!

Experiential learning opportunities such as those offered by Cooperative Education are among the best and most effective ways to do just what we're supposed to do - produce graduates well prepared to do a job. In return, we get feedback from programs which keeps us continually informed as to how effective our instructional process is in meeting those needs. The feedback procedure is a necessary part of an effective ongoing Co-op Program and it provides the vehicle or catalyst that keeps the world of business and the college's programs

involved together - updating them, improving them, or scrapping them entirely and coming up with new ones when necessary.

In summary, just four short points...first, parallel Co-op along with Career Exploration and Development Programs go hand-in-hand to promote the evolution of the motivated student, a student who is better qualified than his peers to handle educational directions, and is better equipped to meet the needs of employers. Second, Parallel Co-op offers flexible learning opportunities to students who wish either to explore or develop career interests in a meaningful manner to help make more stable career decisions. Third, Parallel Co-op permits unusually fast feed-back of information to faculty and administration so we may update and redesign courses and programs not meeting current needs. And finally, I can tell you from personal experience that a successful, on-going Career Development effort that incorporates Co-op Training Assignments pays off in cooperation participation and involvement from the business community and civic leaders. And because of this, Co-op efforts culminate in immeasurable public and community relations value far beyond FTE count and directly-applicable funding.

Yes, Parallel Cooperative Education is Alive and Well...(as is alternating)...not only at Daytona Beach Community College and in Florida, but wherever institutions are properly attuned to the needs of the publics that they serve!

PART II. EMPLOYERS DISCUSS COOPERATIVE EDUCATION

The "Why"--Employers Participate in Cooperative Education

RONALD SMELT - Lockheed Aircraft Corporation - 1975

An obvious first question is how much does the Cooperative Education Program cost a corporation? We conducted a study in 1973 which went into this question in full detail. We found that the most important component of the cost to a company is the unproductive labor which is unavoidable as the co-op student learns a new assignment. We found it was extremely difficult to come up with a numerical value for this lost time. However, fifteen supervisors of co-op trainees, both present and past, were asked for estimates of the amount of time lost each quarter as a student learned the assignment. As you might expect, the answers varied widely. When the student was given a relatively routine assignment, estimates were as low as 8 hours of lost time. But when the student was given a fairly sophisticated assignment, he was really learning during the whole quarter, so that the lost time was as high as 200 hours. The average of all these estimates was 90 hours. This would be equivalent to about \$600 of cost per quarter; if the co-op trainee works with the company three years before completing the program, we can identify a cost to the company of about \$3600. We find, however, that only 64% of the students actually complete the program; the others stay in it for an average of about 1-1/2 years before withdrawing. In consequence, we conclude that the lost time in learning new assignments probably represents an expense of \$4600 per student completing the program. There are a few other costs for processing and administrative activities, so that the round figure is probably about \$5000 for each co-op trainee who completes the program.

On the whole, it is roughly comparable to our cost for the other programs which I mentioned. You will recognize, however, the significant difference between the Cooperative Program and the study programs planned for our permanent employees. The Cooperative Program is reaching out to students much earlier in their career, when they have not already decided fully on their career, whereas most of our permanent employees taking advantage of the other programs have already opted for a career in science or engineering.

I am personally convinced that it is extremely important to bring to the young student the facts of engineering and science at the earliest possible time. In fact, during my time as President of the American Institute of Aeronautics and Astronautics, I strongly pressed for programs like the JETS idea, which gave our young people some idea of the challenges of science and engineering even during their high school days. In my view, this is really the big advantage of the Cooperative Education Program to us, and it is well worth the cost which I have cited. It enables the young student to experience the world of the scientist or engineer in industry at first-hand, before he has been forced to make a career choice. For this reason, I am not at all concerned over the fact that 36% of our cooperative students do not finish the program; our statistics show that the biggest group withdrawing from the program are those who decided to change their major to one which didn't fit our needs.

You are probably wondering about the subsequent history of the 64% who complete the Cooperative Program. We find a remarkable consistency across our companies in the number who then want to stay with Lockheed. Between 59% and 65% of those completing the course then wanted to join us permanently. Up to a few years ago we could accommodate this entire 65% but in the last few years, owing to the economic conditions within the aero-space industry, we have had to turn away quite a few of these men. In fact, we dropped to a point where our retention rate was only some 35% of those completing the entire Cooperative Program. I hope this condition will improve in the near future.

Perhaps the most interesting data collected by our study concerns the subsequent career of those men whom we retained under the program. We compared them with an equivalent group of non-cooperative education students, to see how they fared in their work for Lockheed. We have a number of alternative measures of their progress; their subsequent salary level as it increased year by year, or their rate of promotion into higher levels within the company. These criteria all show the same general result, so I will quote only the job grade data. Our study found that after three years work, the cooperative man was approximately one year ahead of the non-cooperative student; in other words, the non-cooperative man took four years to reach the same grade as the cooperative man had reached in three years. The differential was even more startling after six years; the non-cooperative man took 9 years to reach the same job grade as the six-year man from the Cooperative Program. This is very specific evidence that the Cooperative Program is giving us a man better qualified for our professional team. We have of course speculated on the reasons for this; evidently it must be partially the fact, to which I have already referred, that we had weeded out at an early stage those men who are not constitutionally suited for an industrial professional career. The other, more usual, explanation is that we have familiarized the man, at an early stage, in the customs and even the language of the engineering groups within industry.

GARY E. WILSON - Huntington Alloys, Inc. - 1977

Since its beginning early in the century, Cooperative Education has grown tremendously. To best describe why Huntington Alloys, Inc. has participated in the growth of this program, let me begin by mentioning something of our experience.

Huntington Alloys, Inc. was assigned its first cooperative student by the University of Cincinnati in 1923. Our incoming cooperative students now find it interesting that we have retired employees with 40 to 45 years experience who participated in the early years of Cooperative Education.

The effects of this program are very evident at Huntington Alloys, Inc. Many members of our staff at the professional and managerial levels did their cooperative work with us. This includes the past President of Huntington Alloys, Inc., Mr. J. E. Carter, who is now Chairman and Chief Executive Officer of Inco Limited, our parent organization. Also, our Executive Vice President, Vice

President of Research and Development, several Section Heads, the Production Manager, two Superintendents, and fifty or so others in our management are former cooperative students.

We in business and industry must look at Cooperative Education in a practical way. We want to provide meaningful work experience to the students while receiving a return for the dollars we invest. We believe both can be accomplished. What are some of the benefits employers might expect from Cooperative Education?

RECRUITMENT: Cooperative Education is increasingly important to us as a source of proven talent. The program offers an opportunity to evaluate a student before a pertinent employment decision is made. Through the performance of the cooperative students we can determine how they can best be trained and developed as permanent employees. This is an important pragmatic benefit that effective college cooperative coordinators keep in mind when assigning students to employers.

LOW TURN-OVER: Another benefit from the employment of the graduating cooperative students, to us at least, has been the extremely low rate of turn-over. While we enjoy a very low rate of turn-over at Huntington among our professional employees, the record for ex-cooperative students is much better than we experience with other professionals we employ. The students have an opportunity to evaluate an employer before making the important career decision.

MORE IMMEDIATELY PRODUCTIVE: We find the cooperative graduates are more immediately productive than graduates who have not had cooperative experience. For example, the engineering graduates who have completed the cooperative program rarely require more than two months or so of training and perhaps more frequently we are able to assign them directly to productive work with little or no training in addition to their cooperative work periods. However, when we employ professional engineers outside the cooperative program, we expect to provide a year's training.

NEW IDEAS: The entry of bright, young people, fresh from an educational environment can provide us with new ideas. The cooperative students are undergoing college programs which prepare them for a job and they are eager to succeed. The cooperative students often bring contagious enthusiasm to their jobs and make real contributions to our operations.

DEVELOP MORE TOTAL UNDERSTANDING: By working with and observing people of varied disciplines and backgrounds in this actual work situation, the cooperative students realize the relevancy of classroom work as well as work outside their immediate specialities. This contributes to their understanding and, in turn, makes them more valuable employees.

VITALITY IN EDUCATION: The students play a very important role in keeping faculty in touch with the needs of employers, which is an indirect benefit to employers using the cooperative program because some schools formally tap this source of information and use it in planning curricula and in teaching.

It is important that with the benefits of the Cooperative

Program there are also responsibilities and problems. We must face the fact that not all cooperative students are ideally suited to the program because they are working in the wrong field or are working with the wrong type of organization. Employers, as well as colleges and universities, have a responsibility to guide the students --to help them find their place. We have a tendency to avoid this because it can be unpleasant. However, no counselor or employer should ever shirk this responsibility. The students deserve and will eventually appreciate an honest evaluation and/or recommendation pointing them toward the career for which they are best suited.

It is appropriate, I believe, to mention what I regard as one of the most serious problems in the utilization of cooperative students. It is my personal opinion and observation that the capabilities of these highly intelligent, highly motivated young adults is often under-utilized by many employers. Learning to use cooperative students effectively is not easy. It might call on some of us older, more experienced people to admit these students have some wonderful ideas. Ideas often as good as or better than our own.

HERBERT W. PETERS - Ford Motor Company - 1977

Ford Motor Company enters its 24th year of association with cooperative education and continues to support this education combined with practical experience concept. Company management believes that the opportunity for students to work on assignments that are closely related to their college majors is excellent preparation for a career within the automotive industry.

Objectives established for Ford Motor Company's College Cooperative Program include the following:

- ° To recruit high potential cooperative students pursuing degrees in the fields of engineering, physical sciences and business administration.
- ° To provide meaningful work assignments that: (a) make use of the student's academic training and (b) assist the student's development.
- ° To improve the Company's college graduate retention experience.
- ° To establish and maintain favorable relationships between the Company and schools involved.

In addition, the College Cooperative Program enhances the Company's affirmative action efforts by making opportunities available to minorities and women who might lack exposure to the industrial world.

The experience gained through a cooperative work assignment will facilitate the entry of a student into professional employment and serve as a vehicle for making a career choice.

Cooperative education provides the Company an opportunity to demonstrate its role as a concerned corporate citizen. Additionally,

there is an increasing need for industry and education to combine its resources in order to enhance the development of individual employment careers.

The strength of cooperative education is that it gives cooperative employees a chance to test interests and abilities under actual working conditions and it gives management an opportunity to decide whether interests and aptitudes are consistent with skills and abilities.

We at Ford Motor Company believe that cooperative education is good business because it is practical and our experience has demonstrated that co-op works.

JOHN L. CAMPBELL - Union Carbide Corporation - 1974

I have been very much interested in cooperative education for more than half of my 40 years with the Linde Division of Union Carbide. Until about five years ago, it was as a Production Manager. Then, my activities were given official sanction and I expanded my efforts to the entire Linde Division. During the past three months, I have been making a survey at other companies which have had successful co-op programs over extended periods of time. The purpose of my survey is to gather pertinent information which will be used in promoting cooperative education throughout all Divisions of Union Carbide.

Everything I have learned thus far substantiates my long held opinion that a good co-op program is the very best recruiting "tool" a business organization can have. There are many reasons for this which I will proceed to explore with you.

First of all, participation in the cooperative venture must make good business sense. Otherwise, it would not have enjoyed the phenomenal growth it has over the years.

Cooperative education exposes the student to the most current and progressive practices and principles in the student's field. It helps to develop the self discipline that will make him or her successful in the business and industrial world. It exposes the student to the types of personality with whom he or she must work if the desired goals are to be accomplished. It builds self confidence by permitting the student to compare himself or herself with others in actual working situations and determining that he or she is capable of meeting the demands that will be placed upon him or her.

There is no doubt that it equips the student much more quickly to take his or her place within a company and perform productively virtually from the start of the full-time employment.

These are real benefits which produce real return in terms of dollars and cents. In these days when productivity is being stressed in so many areas, co-op experience tends to eliminate or sharply reduce the training period before a new employee becomes a fully qualified member of the work force.

Evidence of experience over the years demonstrates that participating students are very productive during their career learning assignments and that faculty members at participating schools frequently modify classroom activities to make educational programs more relevant to the needs of the employers.

Cooperative education helps students discover a work in this world that is really worth doing; the kind of work for which they are willing to continually make the sacrifices of time and effort so that they can do that work ever more effectively and efficiently. Generally, students bring a fresh inquisitive eagerness to their assignments that profoundly challenges the imaginative qualities of supervision. This is good in having the effect of keeping first line supervisors on their toes. Cases have been reported where the supervisors have been known to become so dependent on the co-ops that it is with the greatest reluctance that they release the students to return to their respective campuses.

Frequent interviews with the students by their immediate supervisors and others during the work assignment bring assurance of any helpful changes that are taking place in the co-op program. That which was vaguely heard in the classroom begins to take on new meaning as the work assignment develops. Careful communication pays an additional dividend: the students return to campus eager to share their new knowledge with their peers and professors.

Occasionally a student does poorly in an assignment. There are many reasons for this, including hidden disappointments at what he or she has been given to do. However, if the students can be persuaded to discuss any dissatisfaction very early in their assignment, the problems can usually be corrected.

Youth, of course, is a time of idealism and co-op students sometimes tend to approach a job with the idea that every minute of every day must be exciting, meaningful, and productive. It is a rare work situation that is consistently stimulating, and unfortunately, a period of unhappy adjustment must be suffered by many a student and employer.

As mentioned previously, cooperative programs provide an excellent opportunity for the student to gain practical work experience in his major field of study. The good assignment will often serve to be the turning point of the student's life in determining his future. For the employer, assignments have served as a valuable recruitment device.

Employers and co-op educational students need each other. Each needs to be flexible and have a good understanding of the other's problems if the co-op program is to fulfill its complete potential of benefit to the student.

A good co-op program can be effective in enhancing a company's public image. Increased knowledge about its products will be spread to the cooperative student's faculty contacts, school administrators, other students, neighbors, and friends.

Not too many other companies have up-to-date figures on the percentage of co-ops who come with them after completing their co-op

work periods. However, all the representatives to whom I have spoken, have estimated the figure to be between 70% and 90%. In Union Carbide the figure is higher than 80%.

This brings us to the important item of retention rate. We made a survey in the Linde Division Production Department for the five-year period of 1965 through 1969. It disclosed that our retention rate for co-op graduates was 83% while for employees without previous part time experience with us the figure was 55% which was at that time about the average for all industry.

In the survey I have been making in other industries, I learned that one company presently has several hundred cooperative trainees and plans to increase that number. Also the following top officials of that company are co-op graduates: President, two Group Vice Presidents, and ten other Vice Presidents-General Managers. They estimate that a large majority of supervisory personnel at all levels to be co-op graduates.

All of the other companies I have already surveyed have told me that they realize that campus recruiting will have to be continued. However, they all are hopeful that their increased use of co-op programs will permit them to avoid expanding campus recruiting activity to the tempo reached a few years back.

MARY KRAMER - Youngers - 1977

Co-op Education is one of the rare and happy cases where business, education, and the Co-op student can all be winners.

As a person who has spent most of my professional life in education, it is perfectly delightful to me to find educational experiences where students participate in "real-life" situations. Perhaps nothing is quite as "educational" as having a job, learning to know the structure of the company, finding out there are real people in business who think profit is not a dirty word and who provide a caring environment for one another.

As a personnel director, I find co-op students a real bargain. For instance, the young person who is majoring in home economics needs some practical experience. The drapery department is becoming almost impossible to staff because people are not sewing, they are often buying ready-made draperies and therefore very few people understand how to measure a window, how to measure the yardage necessary to drape the window and provide any expertise in color and texture. The co-op student is delighted to do this, he/she is able to counsel the customer and by providing a small amount of training in measurement, the bottom line again is served well.

Young people today often forget in their search for "management" positions that in business, particularly the retail business, selling is the name of the game. The buyer must keep the finger on the pulse of the customer and the only sure way to do it is to spend some time on the selling floor. What a surprise this is to some students! The

buyer actually enjoys the challenge of greeting and selling that customer--and the student begins to share the excitement of motivating other salespeople and providing the good model of customer service so desperately needed in today's businesses.

Additionally, where there is a variety of interest on the part of the student, a co-op station providing a series of experiences may well determine what type of marketing, whether the financial division or if people management is actually the major interest that needs to be developed. Very few companies are equipped to allow their management trainees an opportunity to dabble in several areas while seeking their most productive niche.

In our company, we try to provide adequate in-store training and orientation for our student workers. We try to assign a counselor, almost on a "peer" basis to answer questions and to provide back-up when necessary. The latter is almost never necessary after the first week on the job. If projects are required as part of the experience, it is a project that has purpose both to the company and the student. Customer surveys inquiring as to how services and merchandise selection can be improved are usually very useful to student and to company.

Finally, upon re-reading much of this article, it would appear that companies unselfishly provide educational opportunities for students. Maybe so. But there is a really bottom-line oriented motive behind it all too. Once the student is part of the company, has made friends, has had some success, experiences, and has found a comfortable work environment--that student is ready to remain on and become an instantly productive, contributing employee.

Why Co-op? It serves education, business and students well.
It is an extremely practical corporate training period.
It works!

JOHN E. DEMLOW - Chrysler Corporation - 1977

Increasingly more and more companies are turning to cooperative education programs to enhance their recruiting effort. This isn't just a chance happening but a planned effort. With the job market constantly changing in terms of supply and demand, it is only natural that companies seek out graduates who are in possession of good work and academic preparation. Certainly, students who choose cooperative education have this and, as a part of their overall learning experience, they will be rewarded at graduation time, because they have prepared themselves for the world of work. The reward comes in the form of job offer certainty.

Students benefit from cooperative education in the following ways:

- aids in career choice
- aids in selecting employer
- provides a comparison of the relevance of academics to work
- provides financial aid

Benefits to the employer are:

- permits evaluation of student before making a permanent hire commitment
- provides trained graduates who are immediately productive
- provides better recruiting results
 - acceptance of job offers
 - retention
- lowers recruiting costs
- assists in recruitment of minorities and females

Successful co-op programs can soon become unsuccessful, however, if employers misuse the program. Employers must be careful that students receive challenging and valuable work experiences. By the same token, the student must give his or her best, because an employer formulates opinions about the co-op and the program in general if the student's performance is lackadaisical or less than average.

At times, the question of what does one do after college has been close to a national dilemma. Cooperative education takes a giant step toward answering that question.

How Employers Select Cooperative Students

JOSEPH F. BUGEIA - Ford Motor Company - 1975

The Ford Motor Company has recently localized its College Cooperative Program. Each participating Company component is responsible for all college cooperative recruiting activities which include:

1. Contacting selected colleges
2. Establishing recruiting dates and providing recruiting materials to the colleges
3. Selecting and training Company recruiters
4. Reviewing and referring all applications
5. Maintaining liaison with college coordinators

Prior to the selection of a cooperative student, the component will determine the following:

- Type of cooperative opening to be filled (technical versus non-technical degree)
- Minimal grade point requirement
- Geographic location of assignment
- Timing of opening (when will student be required to start; will an alternate be required?)

Based on these factors, the following steps are taken:

- Identification of a college/university in the area offering type of major/degree desired, and having an appropriate academic calendar to meet timing requirements of opening.
- Contact school to list opening and gain agreement on method of handling referrals and time involved.

When candidate applications are received from the school, they are reviewed to determine the following:

- Have requested majors/degree been provided? If not, is there an explanation from the coordinator?
- Does the area of interest identified by the student match the opening?
- Academic year in college/university
- Number of work periods available
- Date available to begin work (and return to school)
- Any previous work experience
- Geographic preference, if any
- Projected graduation date

Based on the component's review of student files, offers or personal interviews are extended.

Each component is encouraged to promptly make a decision on each Cooperative Program applicant, generally within ten working days following receipt of application. We feel that an immediate response by the component is beneficial to the student and the college coordinator. College coordinators have only a limited time to place their students. Therefore, any delays in our recruiting procedure places a burden on the school coordinator to place the student elsewhere if the Company does not take him.

L. L. KNICKERBOCKER - Detroit Edison Company - 1975

The selection of engineering students into our cooperative program is based mainly on the initial screening interview and if the student is found acceptable as a result of the initial screening interview, a later plant visit and interview will be arranged.

The initial screening interview can take place at our local office in Detroit or on campus. During this interview, we review with the individual his educational background, various interests, appearance, career goals, hobbies, specialized skills, etc.

In the process of reviewing an individual's background, we will

frequently ask some of the following questions:

1. What are your future vocational plans?
2. In what school activities have you participated? Why did you choose these activities, and which did you enjoy the most?
3. What courses did you like the best so far? What courses the least, and why?
4. How do you spend your spare time? What are your hobbies?
5. Why do you think you might like to work for our Company?
6. What do you know about our Company?
7. Why do you think you would like to co-op with our Company?
8. When and why did you choose your college major?
9. What has been your grade average trend so far and why?
10. Are you more interested in working out problems in a lab or in classroom theory or both?

Once we are certain that the individual has a real interest in our type of work based on answers to these and other related questions, we then make arrangements for a plant visit and interview.

This plant visit and interview gives the student a chance to meet other co-op students and get their reaction to the work. The person also meets the supervisor and gets a chance to see what the actual physical working conditions are like, plus some detailed demonstrations as to what co-ops are expected to do in their beginning and future job assignments. The supervisor will attempt to measure the student's reaction to the overall visit and interview the student in more detail as to course background and how he sees the individual being able to apply this classroom knowledge to an actual work situation.

Once this plant visit is completed, a report is made to the Personnel Office as to a hire or no hire recommendation by the supervisor and the reasons why. This report is considered in light of the original information from the initial screening interview, and after careful comparisons are made between students being considered, a final choice is made. This decision is then relayed to the co-op coordinator on campus.

It should be mentioned that in the whole selection process we also rely on the background information initially provided us on each student by the co-op coordinator on campus and especially when it comes to questions of academic performance and general student attitudes and interests we have found somewhat questionable in our selection process.

WILLIAM E. WEISEL - Cincinnati Milacron, Inc. - 1973

The selection of a cooperative student follows a large amount of prior planning and attention to details. While the first step seems most obvious, it is one that is frequently given inadequate attention. A cooperative employer must carefully determine requirements and objectives for a cooperative program. Among some of the considerations are:

- Long-range needs (four to five years or more).
- Short-range needs (immediate).
- Type majors: Engineering--ME, EE, IE, etc., Business Administration--Marketing, Marketing Research, Accounting, etc.; Liberal Arts--Chemistry, Math, English, Social Science, etc.
- Degree level: Associate, Bachelor, Master's, Doctorate

Of course, each of these determinations will depend upon the type and nature of the business and each employer. For example, there will be a vast difference in the requirements of a large manufacturing-type industry, such as Cincinnati Milacron, compared with a small bank or financial organization.

Each employer must set up good working relations with the school's cooperative coordination department. It will be most effective if this is done on a personal basis at the school location. Following the guidance and advice of the school coordinator is an invaluable aid in the selection process. It will be well to have the school coordinator actually visit the cooperative employment location, so that the coordinator has a better understanding of the environment and conditions that will be met by the cooperative students.

The selection process will vary from school to school and from employer to employer. In any case, the employer needs to become well acquainted with the procedures used at each school.

Some employers prefer to have the school coordinator make the selection, while others prefer to select the cooperative student from a group of candidates. In some cases, it will be appropriate for the employer to visit the campus and interview prospects there. On the other hand, it is often better for the potential candidates to visit the employer's site, and be interviewed at that point. Each employer will have to determine the best procedure for his individual situation, that will best serve the employer, the school, and the student.

The employer will probably want to use the same selection criteria in the selection of cooperative students as with the selection of any other employee. The employer should not lose sight of the fact that there may be competition for an individual, and that the student may be doing some selective interviewing also.

The employer may also want to pay attention to starting the selection process at the high school level. There is much to be said for finding the right individual in high school, and then motivating

the student to participate in cooperative education after enrolling in college and joining the employer as a cooperative student.

In general, the selection of cooperative students should not differ vastly from that used by the employer in selecting other employees. Perhaps the most important aspect is that of getting a thorough knowledge about the cooperative program at various colleges, and learning in detail how the cooperative coordinators wish to operate. Continuous and effective communication is a must.

NANCY BALOG - The J. L. Hudson Company - 1974

The student's first contact with an employer may be through a number of different channels; college recruitment, referral, "walk-in", or resume. Whatever the route is, the important thing to keep in mind is that the old saying of first impressions being the most lasting is very true.

A student guide to "psyching out the interviewer" would go something like this: Let's start at the beginning--with the resume or application. Make sure that it is as complete and informative as possible without being a doctoral dissertation. This may seem like a contradictory statement; but keep in mind that an employer may receive 50+ resumes a day, and if one says it all in a page or two, another in six or seven, guess which one he will read thoroughly.

You have passed the resume hurdle and an appointment has been set up. Some general rules to follow:

1. Be on time!
2. Dress the part! (You are going to a job interview, not a football game.)
3. Don't worry about being nervous; an experienced interviewer will put you at ease in two minutes.

Be as complete and informative in the interview as you were with the resume. One change from the resume rules; this is not necessarily the time to be concise. One word answers with no elaboration do not give the interviewer much more information than that piece of paper he has in his hand. Know what you want (or at least generally what you want). Nothing turns an employer off faster than to hear, "I don't really know what I want. I thought you could tell me what you have available".

Be prepared to answer questions like:

- "What are your strengths?"
- "What are your weaknesses?"
- "Why did you apply here?"
- "What are your career goals?", etc.

There is one answer that surpasses "I don't know what I want to do" in terms of not impressing anyone. Never say, "I applied for this

job because I like to work with people". If the interviewer asks you to name even one job where you don't work with people, you're stuck. (Hermits excepted.)

If you're not familiar with the company, research it if at all possible. Ask any and all questions that you need answered in order to make a decision. After all, you're doing some selecting, too.

Some of the basic qualifications that you will be judged upon are:

- Willingness to work in the area where the business is located. (Are you primarily looking for a position in another part of the country? Do you want to work in Detroit?)
- A course of study which has some relation to the business. Grade point average should be satisfactory. (Things taken into consideration that could affect the GPA would be: Do you work? Are you involved in campus or community activities? Do you have a family?)
- Are you an individual who has worked before, particularly in a group setting? Few employers wish to be an individual's first exposure to the business world, especially for the college graduate. The summer and/or part time jobs need not be in the employer's field, but a student who has worked generally needs less "business world" exposure.
- Have you been involved with group activities, whether it is a club or fraternity on campus, or a community group? Again, this type of student has usually had "people" exposure.

Above and beyond the statements mentioned, again most employers will be impressed with a student who knows something about the business and the job for which they are interviewing. They look for aggressive, confident people who appear to be ambitious and wish to succeed, and who are willing to learn.

You will be selected if you have the intellectual, scholastic, and personal qualifications for the business; if you appear to be the aggressive, competitive, figure-oriented, flexible, innovative, and hard-working individual who would do well.

If the employer goes to the time and expense to recruit for college graduates, he is looking for people who can move rapidly, not career, middle management types. Prove to him that you fall into this category and your chances of receiving an offer are greatly enhanced.

JOHN LEWIS - Detroit Bank & Trust - 1972

We consider the acceptance of our organization's offer by a co-operative education student to be the beginning of a career with us. Though the continuity of career employment may be interrupted by periods of school attendance, the student's on-going relationship with our organization in terms of professional development is not

disturbed. It is for this reason that selection standards for a cooperative student are as rigid as the selection standards for each of our organization's entry-level professionals.

Therefore, in evaluating a cooperative prospect, our employment specialists use the same criteria as in the evaluation of a bachelor's degree prospect. Namely, we consider major courses studied, academic achievement, activities and interests, work experiences and communication skills.

Our organization actively recruits liberal arts majors as well as business students for cooperative employment. The preparation received by a liberal arts student lends itself to the business community. Oftentimes, the liberal arts student is project-oriented, a problem solver. The business student's academic background, of course, has developed particular skills necessary in our organization: accountancy, personnel administration, etc.

Academic achievement as reflected by grade point average, honors college, Dean's List and scholarships, is important to us when reviewing a student applicant's credentials. Academic achievement alone, though, does not make a good employment prospect.

Other than being academically qualified, the student who desires cooperative employment placement with our organization must show organizational skills - the budgeting of the student's time for clubs, activities, outside interests on and off campus is considered.

A student's work experiences, most times limited and unrelated to our organization, are also considered. The jobs held are not as important as the applicant's ability to relate his learning experiences from the work situation.

Indeed, it is the applicant's ability to communicate with our organization's personnel specialist, relating easily and self-confidently about his experiences, that sells the student in an interview with us. The nature of our business demands daily contact with customers as well as co-workers; good communication skills, therefore, are essential.

After an initial successful interview with us, a student applicant would be invited by letter to once again talk with our personnel specialists and take a short battery of personnel tests. Following testing of all applicants for cooperative placement, an invitation to join our organization would be extended to each student we would like to have make a career with us.

PART III. THE SCHOOL AND THE EMPLOYER

Recruiting Employers

JAMES T. GODFREY - University of the Pacific - 1977

Institutional Directors and Coordinators of Cooperative Education--especially those that are new in the field--should realize that a most important aspect of this business (probably the most important) is the recruiting of employers--the establishment and maintenance of long-term relationships with a group of employers that is large and varied enough to provide educational work experiences for the students involved in the Cooperative Education Program. Not only should the variety of employers be broad enough to provide study-related experiences for each academic discipline offering Cooperative Education, but also for each specialization within these disciplines. For example, the range of opportunities for Cooperative Education students majoring in Electrical Engineering should include electrical power systems, electrical machinery, electronics, communications, automatic control systems, digital and analog computers, etc.

An excellent source of leads for potential employers is the College Placement Annual, published each year by the College Placement Council, Bethlehem, Pennsylvania. This publication is made available to all college and university placement offices. It lists those employers who are planning to recruit college graduates during the current year. In general, those employers who plan to hire graduates in specific fields are more likely to be interested in hiring cooperative students in the same academic disciplines. In other words, there is, normally, a high correlation between graduate hiring and cooperative student hiring; hence, the value of the College Placement Annual.

The Wall Street Journal is another good source of employer leads, in a more general sense. Regular reading of the Journal will keep you up to date on general economic trends and planned expansions in various types of industry and specific companies; and the want ad section will provide clues on what companies are likely to be hiring graduates and/or cooperative students.

The U. S. Civil Service Commission keeps records on federal government participation in cooperative employment. For a list of agencies that hire cooperative students, and the names, addresses, and phone numbers of the Agency Coordinators, write or call: Office of Youth Employment Programs, Bureau of Recruiting and Examining, U. S. Civil Service Commission, Washington, D. C. 20415, (202) 632-5677. For opportunities in state, county, and city government agencies, you should seek out and get acquainted with appropriate officials in your geographical area.

Other sources that might be explored are Chambers of Commerce in the cities where you wish to place cooperative students, the want ad sections in local papers, and the Alumni Office at your institution. Many alumni are in positions with private industry and government where they could either help to promote cooperative participation with their respective employers and/or hire students

in their own organizations.

It is important to develop participation with a large number of small and medium-sized employers--those who might typically employ only one or two Cooperative students at a time. These smaller employers tend to become the "backbone" of the Cooperative Education Program--they are less likely to be affected by economic recession and will, for the most part, keep at least one Cooperative student on the payroll through good times and bad. Executives of these smaller organizations usually belong to a service club (Rotary, Kiwanis, Lions, etc.) and presentations at your local service club meetings can be highly productive in recruiting these employers into your Cooperative Education Program. The program chairpersons for Rotary, Kiwanis, etc., are always looking for public-interest presentations. Get acquainted with these people; get on their program schedules; and tell the story of your Cooperative Program. Ralph Porter, Executive Director of the National Commission for Cooperative Education, has prepared A Coordinator's Guide to Selling Cooperative Education, with accompanying 35 mm slides that can be easily adapted to fit your own program by including some of your own slides. Ralph has also put together a cassette recording of a CO-OP sales presentation that can be synchronized with the slide show. This excellent sales package can be obtained at nominal cost by writing to the National Commission for Cooperative Education, 360 Huntington Avenue, Boston, Massachusetts 02115 (Phone (617) 437-3465).

It is especially important to promote long-term relationships with employers. A successful, on-going Cooperative Program needs an adequate array of work opportunities "now", next year, five years hence, etc. Employers that are considering participation for the first time should be encouraged to establish "billet(s)" for Cooperative students and provide budget and planning for these billets year after year. It is the responsibility of the institutional Director/Coordinator to establish this aura of permanence about the Program--the feeling that the school and the employer are embarking upon a mutually beneficial venture that will continue and grow over a long period of time. Toward that end, the employer should understand the institutional Cooperative Program policies--especially the rules and regulations for students that are designed to protect the school-employer relationships.

You should meet prospective (and active) employers more than half-way. Let them know that you expect your students to be productive at the same time they are learning. One of the major enticements for employers is, of course, the prospect of more efficient and better recruiting of college graduates--the opportunity to thoroughly evaluate prospective professional employees before permanent commitments are made. This part of the appeal seems to be well understood, although it should certainly be pointed out to prospective employers. Perhaps more emphasis ought to be placed on the point that Cooperative students also do productive work. They are expected to "earn their keep", and abide by the employer's policies and regulations. It should be emphasized to employers that Cooperative students are not to be treated as prima donnas.

Another part of the "pitch" to prospective employers ought to be the promotion of the "industry-education partnership" concept--

pointing out the opportunity for employers to actively participate in the process of higher education, possibly to the point of affecting curriculum planning (directly or indirectly) in ways that would better prepare graduates for employment in that particular company and industry.

It is also the institutional Director/Coordinator's responsibility to establish and maintain effective communications with prospective and active employers. The employer should designate a person to be responsible for the hiring, internal assignment, and professional development, of Cooperative students. This person might also be called a Director of Cooperative Education, and he is the person that the institutional Director/Coordinator should get to know well. Continuous contact should be maintained through telephone calls, letters, newsletters, and personal visits. In this way, the institutional Director/Coordinator can (and should) become familiar with the employer's products and procedures, the broad picture of the industry, economic and employment trends, and--especially--the opportunities available for Cooperative students within that employer's organization. In Cooperative Education not only is "one picture worth a thousand words", one plant tour is worth a thousand pictures when you are trying to relate employment opportunities to prospective Cooperative students.

Finally, it seems obvious but it's easy to forget, we must always keep in mind that Cooperative Education is not possible without participating employers.

GEORGE H. MILLER - University of South Florida - 1973

Recruiting employers is one of the most important areas of work for the cooperative education staff, especially where the program is just starting. It is advisable to recruit employers before starting to recruit students.

When starting a program, where do you start in such recruitment:

Local employers

- Member of the Chamber of Commerce Industrial Committee
- Retail Merchants Association
- City and County Agencies
- Local Federal offices and local State Government offices
- Non-Profit Agencies, other than government, such as United Way, Red Cross, Boy Scouts, etc.

Outside Local Area employers

- Federal Agencies in Washington, D.C., as well as regional offices for your region

- Utility companies which cover large areas...they may not have a major operation in your area even though they serve your area. Go to their home office to discuss cooperative placement.
- State Agencies of your state and even nearby states. Does the agency have a policy on cooperative education, such as the State of Florida has? Make use of it if it does. Check with the personnel office of the State or individual agency.

Get a collection of Idea Books

- Local Industrial Directory - Contact all that have more than fifty employees.
- State Industrial Directory - Contact those with 100 or more employees.
- Phone books of major cities in your region. See Yellow Pages for major employers.

Meet Employers Face to Face, Handshake to Handshake

- Attend the International Conference of the Cooperative Education Association and meetings of the Cooperative Education Division of the American Society for Engineering Education. Perhaps, also, attend the annual meeting of the Society of Field Experience Education. Plan ahead and contact a minimum number of employers, at least eight a day.
- Attend your regional or State Cooperative Education Conference and make similar contacts as above.
- Set up your own conference, have your president or vice-president, or dean extend invitations to those whom you wish to contact. Have a visiting Cooperative Education speaker or consultant tell a story to an assembled group.

While the above ideas all take, to a great degree, much follow-up by letters, and wherever possible by visitations, the phone is good for communications also. Most important is a budget that will permit coordinators to travel, make phone calls, and have proper secretarial support.

In preparing to recruit employers first prepare some sales-pieces, a small brochure, or a page of printed literature, that you can mail, leave on visitations, or have available if employers visit your office, which will briefly describe the program. Have such material sprinkled by statements of other employers who have found cooperative education a worthwhile program.

Comparison of Students' and Employers' Needs

S. B. COLLINS - Drexel University - 1972

Needs of students and requirements of employers are the heart of the process of cooperative education. The importance of recognizing the fact that students have certain objectives in taking a cooperative program and meshing their employment with employers who have their own set of objectives cannot be underestimated. To bring these two parties together requires certain skills whereby both parties can understand the motivations of each other in creating the partnership. This can perhaps be described as bringing the views of younger, formative and inquiring minds against the old well established conservative views of those on the employment scene and one can easily see that these two views don't always mesh well. Someone once said that the objective of the college coordinator is to explain to the student the views of the established employer and as contact with the employer to represent the thinking and objectives of the younger student as they exist. Insofar as the coordinator is successful in this will lie a great deal of success or failure of the student's placement.

It is no secret that most employers engage themselves in cooperative education in the hopes that when the student graduates, he will be a prime prospect for permanent employment and might be induced to work there on a career basis. I would submit a sub-motivation, however, in that the services of most cooperative students are rewarded by salaries which are commensurate with their abilities and productive efforts. As such, they are good employees even for a temporary term of service which is the cooperative period, even if they do not return in succeeding periods.

It may fairly be said that the majority of employers are looking for the best students that are available for employment in the program. "Best" usually means a respectable or upper-level grade point average. They are concerned with how far the student has progressed in his academic work, his past experience, and his overall career objectives. The student's appearance and dress are important in the interview situation, and students should be advised on this matter prior to the interview.

From the student's standpoint, he is likely to be motivated by two strong factors which may be weighed approximately equally. The first is to attain that objective which we call experience in the field of study, and enforcement of academic and career objectives, and the actual relationship of at least some part of the studies to what he is doing prior to graduation. The student is also highly motivated by the opportunity to earn a salary which he can apply to the cost of education. There is also interest in obtaining a job which will be challenging, at least in part. He wants an association with an employer which will have a future, and likes a pleasant, compatible working atmosphere under supervisors who will have some interest in him as an individual and who will understand the educational aspects of cooperative education.

S. J. HIRSCHFIELD - Chrysler Corporation - 1972

In the cooperative education program, the student expects to be paid while learning. The company expects performance on the job and an opportunity to evaluate the student's long-range potential. The experience of many companies that have successfully balanced their requirements with the needs of the cooperative students shows that conflict is more apparent than real.

The foundation for a strong cooperative arrangement is a clear understanding of the needs of each of the partners. In helping the student better understand what he should expect from the company, the schools need to develop their educational philosophies and administer their cooperative programs in light of the employer's needs and limitations.

Industry must understand the unique needs of the students. For its part, it must be sufficiently farsighted in its own programs to realize that it serves its own larger purposes when it meets the student's immediate need for a rewarding work experience. The major objectives of the cooperative program a company administers should be:

- job assignments which help a student learn more about himself and his own interests
- preparation and help for supervisors so they can better understand the students
- better counseling and evaluation, and closer ties with the schools.

It is well known that cooperative programs have special advantages for students and schools. Beyond this, the cooperative program helps industry meet the critical need for trained manpower. There should be no conflict between the needs of the students and the requirements of the company.

WANDA B. MOSBACKER - University of Cincinnati - 1973

Most of the emphasis in cooperative education articles and booklets is on meeting the needs of students and far too little space has been given to the needs of employers. No matter how philanthropic companies would like to be, they are first and always business institutions functioning for the express purpose of making a profit. Schools offering cooperative education programs must be concerned that cooperative programs always be mutually beneficial and the needs of the employers must always be recognized in establishing programs and in referring students.

However, since there are two representatives on the panel from business and industry, these remarks will point up some of the needs of students. Students look at their practice assignments from quite a different viewpoint than the employer. Also, even though employers usually are aware of the needs of the students, circumstances often

make it impossible and sometimes undesirable to satisfy the needs:

- Need for recognition as an individual, a feeling of belonging, a feeling of accomplishment and a feeling of security
- Need for relevancy
- Need to be challenged
- Need to learn to exercise a degree of patience
- Need for a smooth transition from school to the work environment
- Felt, or real need for high income and a need for security
- Need to be working under a concerned and interested supervisor
- Need for a more permissive climate than exists in many businesses
- Need for an accessible location of employment.

M. G. TAMMEN - Arthur Andersen & Company - 1977

Our Detroit office employed its first co-op students in April, 1966. Since that time, an average of two cooperative education students have joined us each year, and their history has been one of consistent success. A significant number have become managers and top seniors and have performed exceptionally well in all areas of our practice—audit, taxes and management consulting.

Beginning with the initial interview, we look upon co-op students as probable permanent members of our professional staff. Accordingly, on an on-going basis, we treat them as regular professionals.

During a co-op student's first visit to our office a manager will spend an hour with him familiarizing him with the duties and responsibilities of an auditor. He will draw from his own experience and give examples from a typical audit engagement. He will describe the audit team and explain how the student will fit into that team. He will also describe the other areas of our practice, tax and consulting, and explain how the student can prepare for a career in these areas.

He will also explain to the student the types and diversification of assignments he can expect, the supervision he will get and how responsibilities are increased as he progresses from one assignment to the next. He will also define to the student the nature and breadth of our industry involvement.

Also, during the co-op student's first visit to our office, an officer manager will describe the training aids, research, training and library facilities available and the nature of our local and firm-wide training schools. Our system of performance reviews

will be explained.

At the close of the office interview visit, a member of our staff will take the student on a complete tour of our offices and will show the student our libraries, training aids, reference material and training room. The staffmember will take the student to lunch and will tell about his or her own experiences on the job and in our local and firm-wide training schools.

When reporting for a first work experience, a cooperative student will visit with an office manager in an indoctrination session during which local and firm-wide office procedures and personnel policies are discussed. The student is taken on a second tour of the office and is introduced to key office support personnel in bookkeeping, files, typing and libraries.

Once a co-op student begins a co-op work experience, he or she is treated like a regular member of our professional staff. All office services and training facilities are available to the student. He or she attends local and firm-wide training schools and seminars. The student is invited to all office social functions.

Gopher and non-professional work must be kept to a minimum, and cooperative students, although more closely supervised, are given virtually the same duties as our permanent first-year professionals. A large percentage of their time is spent on client premises helping to solve client problems.

Responsibilities of cooperative students are increased as they progress from one work experience to the next and as they complete more accounting courses. Some cooperative students have, in fact, begun their permanent employment with us at higher than entry-level positions. Assignments of cooperative students are diversified as to industry and size of clients over the span of three work experiences.

We can be most helpful to co-op students if we keep them advised currently of their performance and progress, and offer constructive criticism when needed. We try to review with the student his or her performance after each assignment, pointing out strengths and weaknesses and giving recommendations as to how performances can be improved. It is not at all unusual for academic performances of students to improve after they have completed one work experience.

REQUIREMENTS OF EMPLOYERS: Ours is a demanding profession--demanding upon one's time, energy and talent. From the start, our professionals are placed in situations in which, if they are to perform well, they must be able to work effectively not only with associates but also with client personnel--some of whom are at the top executive level.

To become CPA's our professionals must pass a nationwide comprehensive examination.

We need students with good academic records who communicate well with people. We prefer that they have completed three accounting courses when they report for their first work experience. This

enables us to virtually eliminate gopher work and place them immediately in client problem-solving situations.

Students coming with us should be flexible, should be willing to travel 15% of the time and should not be reluctant to work a reasonable amount of overtime. Very importantly, they should be people-and-service-oriented and should enjoy helping people with their problems.

We have been fortunate in that the coordinator of cooperative education at our major source of cooperative students, thoroughly understands the demands of our profession. He understands the motivation, personality, dedication, and competency required of students if they are to be successful with us. His understanding of our requirements has contributed in large measure to the good success we have had with students from his university.

PART IV. ADMINISTRATION OF COOPERATIVE EDUCATION PROGRAMS

Some Thoughts on Cooperative Program Management

RUTH L. PATTISON - The Cleveland State University - 1977

Although the common denominators of Cooperative Education and Placement have always been apparent, there has been justification in the past for both sides of the issue of a jointly administered program. The educational component of co-op has always been the primary focus of the co-op staff and service the primary focus of the placement staff. But new developments are taking place. With the boom years of the 60's gone, placement offices across the country are restructuring their programs to better meet the needs of students in a tightened market. Not only are the department names being changed, but the fundamental objectives of the departments as well.

Recently there has been a preoccupation in both placement meetings and placement publications with necessity--even requirement--for programs that provide students with related, career experience. Much of the discussion has revolved around co-op programs in particular. Employers have begun to ask graduating students about their related experience and there is a growing awareness on the part of the students that such experience is now expected. Faculty too are becoming concerned about the employability of their graduates and are looking to programs that can help their students become more marketable. Even though many co-op programs have been administered under an academic vice president, the educational value--which the co-op staff has always recognized--is only now gaining tentative acceptance by faculty.

One of the major requirements of a viable co-op program or placement office is, of course, the development of a dynamic working relationship with representative employers. The objectives of the co-op program (providing students with testing career choices, etc.) and the objectives of placement (providing students with a broad range of career opportunities through employer recruiting or listings) can only be met through such a liaison function. Both placement and co-op staff members work with many of the same employers, often with the same personnel representatives and are logical partners in helping one another in this effort of serving employers and students. Co-op staff have by and large done a better job in developing good relationships with organizations traditionally thought of as liberal arts employers. As increasing numbers of liberal arts graduates enter the placement office, much more will have to be done for these students. Since it is unlikely that any significant number of non-profit or governmental agencies will come to campuses to recruit on a regular basis, liberal arts students will have to be helped more effectively in career strategy techniques and sometimes apprised of alternate career routes.

Guidance is another objective both departments hold in common. Helping students develop those techniques necessary for effective career planning is a necessity for all students in today's more

competitive market. The exploratory nature of the co-op experience itself has given the co-op department the edge in providing students with career information. And the long term association of the coordinator and student offers the additional opportunity for personal counseling not possible in the short term placement association. Some institutions reinforce their counseling with career orientation courses.

Many placement offices are now making a concerted effort to develop their area into a career development division that is recognized for its educational relevance and its direct link to faculty and are offering a variety of programs designed to help the student, especially the liberal arts student, work through the career decision-making and goal-setting process. The competencies needed in this function of counseling and teaching are the same for co-op and placement coordinators and are another evidence of the closing gap between the co-op and placement objectives and functions.

A combined co-op and placement department may well pose a stronger front in the thrust for recognition of the educational value of their programs and in the effort to gain recognition by the administration and governing boards. Universities are even now being charged by the federal government and challenged by the community to report on the employability of their graduates and in the long run will likely be assessed on the graduate's career performance and contribution to the community.

Students and employers who are conscientiously and satisfactorily served by co-op and placement may well be the best defenders and supporters of their educational institutions in this increasingly critical era.

WALTER F. THOMASON - Broward Community College - 1973

In order to provide an effective climate in which cooperative education students and employers can gain maximum utilization of the program, the following organizational and administrative guidelines are recommended:

- The program should be centralized. There should be one organizational unit on the campus which is responsible for the operation of the cooperative education program.
- The program should be housed within the academic affairs side of the college. Cooperative education is an academic program, and should enjoy the same prestige as any other academic unit on campus.
- Cooperative Program administrators and coordinators should be trained in education and counseling, and should also have some "non-education" work experience in their backgrounds. Cooperative Education has no room for the pedagogical academician.
- The Cooperative Education director should report directly to an upper-echelon administrator, preferably the Dean of Academic

Affairs, or the President of the college or university. The complexity of the cooperative venture requires a fast line of communication with the chief administrator of the college.

- Initially, programs should be voluntary in nature. Any new program which is mandatory in nature places an unreasonable burden on the staff. Programs of quality will grow through effectiveness, and will not need forced participation.
- The program should maintain a coordinator-student ratio of 50 - 75:1. This is especially true in a 2 year college, where the cooperative staff must develop training slots as well as prepare students for placement.
- Non-additive academic credit should be awarded for the cooperative experience. If the program is truly academic in nature, then it should receive recognition as do other academic programs.
- The operation of the program should allow for flexibility. Rules and regulations should be designed to anticipate the exception.
- The terms of employment must be geared to meet the needs of employers as well as students. Various types of work schedules should be designed to broaden the base of participation.
- The work experience should directly relate to the academic or vocational goals of the student.

JULIUS RANDALL - Pratt Institute - 1974

For many years, engineering programs at colleges and universities have conducted highly successful cooperative education programs with industry and governmental agencies. In order to achieve maximum coordination among the educational institution, the co-op employer, and the individual student, four feedback mechanisms have been incorporated into the co-op program at Pratt Institute. It has been demonstrated through experience in co-op education that these four feedback mechanisms are required for successful operation:

- Employer Evaluation
- Student Work Reports
- Coordinator Visitation
- Student Final Critique

A. The purposes of the Employer Evaluations are:

1. To provide information on the student's ability to adjust to the industrial environment.
2. To describe the student's manner of handling the responsibility assigned to him.
3. To guide the student in course selection for subsequent semesters by evaluating his strengths and weaknesses in

specific content areas.

4. To guide the Dean of Engineering and Science in the development of programs which simulate the work environment.
 5. To inform the Director of Co-op Programs whether the coordinators are developing the kinds of co-op jobs which provide meaningful job experience for the students.
 6. To enable employers to compare the performance of co-op students from various academic institutions.
- B. The purposes of the Student Work Reports are:
1. To define the type of job assignment in order to help the coordinator evaluate the degree of congruency between the job description and the actual work assignment.
 2. To judge the nature and level of responsibility in the student's job assignment.
 3. To evaluate whether the levels of progressive job assignment match the increased academic achievement of the student.
 4. To evaluate the development of the student's technical writing skills.
 5. To inform the coordinator about the kinds of jobs the company supervisors assign to co-ops.
- C. The purposes of the Coordinator Visitations are:
1. To see the student and supervisor in a working environment on a project together and evaluate the responsibility of the student's work assignment.
 2. To make it possible for the coordinator to act as a troubleshooter between the company and the student.
 3. To help the coordinator to get a better understanding of the job assignment.
 4. To give the coordinator the knowledge to sell the co-op assignment to other prospective co-ops.
 5. To give the coordinator a chance to familiarize himself with the living conditions.
- D. The purposes of the Student Final Critique are:
1. It gives the student an opportunity to express his likes and dislikes for the program, as well as the program's advantages and disadvantages. Most important, his suggestions to improve the co-op program are an integral part of the report.
 2. The critique is used during the Orientation Seminars to

encourage freshmen to join the co-op program.

In summary, the final goals of the cooperative education program are to create a better environment for learning and a self-sufficient, productive worker in the labor market. The application of an effective evaluation process can help us to achieve these important goals.

Some Administrative Pitfalls

WANDA MOSBACKER - University of Cincinnati - 1977

Failure to get and maintain institutional commitment

A cooperative education program is only as strong as the weakest link in the chain of administrative commitment at all levels above the cooperative program director. When the weak link is at the top, that is the president of the institution, the cooperative program is doomed to mediocrity and often total failure. When a cooperative education program is to be introduced, if all of the administrators who will have some involvement in the program do not participate in the initial planning, they are likely to suffer a lack of understanding about the program's philosophy and objectives. This lack of understanding may later prove to be very difficult to overcome.

At all times, it is extremely important that effective upward and downward communication exists with all levels of top administration.

It is interesting and often very disconcerting that during university fund-raising campaigns, the cooperative education program and its successes are often given "front-page" billing, but, at other times, it is difficult to prevent institutional administrative decisions from being made that adversely affect the cooperative program. University and college administrators are very busy people and, unfortunately, they do not always have a high degree of cooperative education awareness. Unthinkingly, decisions are made that could be disastrous for the cooperative program. This happens even when a number of the members of the committee making the decision are very pro-co-op and, in their opinions, very knowledgeable about the program. Establishing a new university calendar is a case in point. When an institution is contemplating a major calendar change, it is extremely important that the cooperative education program director or a member of his staff be included on the calendar committee; otherwise, the university and college administrators who are not involved in the day-by-day operation of a cooperative education program, might design and adopt a university calendar with which an effective cooperative program could not be correlated. It is advisable and desirable for the cooperative program director or a member of his staff to be appointed to every university or college committee whose decisions could have a major effect on the cooperative program. Thus, he can provide meaningful input during the

discussions and hopefully forestall any decisions that could spell disaster for the cooperative program.

Accepting at face value everyone's thorough understanding of cooperative education

The cooperative program director must exercise care in not accepting at face value everyone's understanding of the essence--the philosophy and the operation--of the cooperative education program. It is far wiser and safer to underestimate their understanding. Administrators, faculty, and employers often give the impression that they understand thoroughly, when actually they have only meager knowledge and are reluctant to admit their ignorance or they understand cooperative education only on the basis "from whence they came." Their experience or exposure to cooperative education could have been with very weak, poorly administered programs, work-study programs, internships, programs highly oriented toward financial aid, etc. Even when their experience has been with programs that have good reputations, their experience and understanding may be very limited or warped.

"Buck passing"

In order to avoid another serious pitfall, a cooperative program director must manage his program. This does not imply that he should not cooperate with the academic departments, for a close working relationship is very important, but he must always remember that the "buck stops here." In a centralized operation, the director must constantly strive to maintain a balance between the coordination department and academic department head/faculty control. However, on the other hand, the cooperative program director should not attempt to be the "tail that wags the dog". His responsibilities are to be the administrator of the cooperative program, the expert on co-op, and the advocate of co-op on the campus, but not the ultimate policy officer for co-op.

Failure to work closely with the Admissions staff

To prevent the Admissions staff from misrepresenting the philosophy, objectives and operating procedures of the cooperative program to high school counselors, students, and parents, the cooperative program director must work closely with the Admissions office. This should not be merely a once-a-year updating each autumn--although such a meeting of the cooperative director and his staff with the Admissions staff in the fall for this purpose, can be very worthwhile. Throughout the year, the Admissions staff should be kept informed of all important changes and trends in the co-op situation. In the case of a cooperative program that is in the process of implementation, the director must not overlook expending intensive effort to establish credibility for his program with high school counselors, administrators, students and parents. The Admissions staff, when properly informed, can be very helpful in establishing initial credibility.

At institutions where annual summer freshman orientation sessions are conducted for incoming students and their parents, the co-op administrator should make certain that he or a member of his staff is included on each program to explain cooperative

education and to answer questions.

Failure to establish a continuing close working relationship with employers

In good times, as well as in bad, the cooperative program director must maintain an aggressive and conscientious coordination effort with a continuing close working relationship with each employer. Regular two-way communication is important. Each should keep the other informed of changes and trends that might affect the students on the program.

It is important that the co-op coordinators hustle as hard for jobs in good times as they would during a recession. In good times, it is easy to be misled that all is under control. The program administrator and his staff must always be "tomorrow minded". Through economic and government publications, business reports, participation in professional organizations, the administrator must attempt to keep his finger on the pulse of the business cycle. He needs to be informed regarding anticipated economic changes, slow-downs, recessions, trends in occupational fields, etc. Whenever a period of recession seems to be in the offing, each coordinator's schedule and responsibilities should be readjusted, and committee work and new projects held in abeyance wherever possible, so that increased time and effort can be devoted to job development. When the economy is sluggish, it is often necessary to seek out more small employers or to go farther afield geographically, both of which are very time consuming alternatives. Being forced to go a great distance from the campus to develop job opportunities sometimes creates a problem for the coordinator in establishing credibility for his institution's program with the distant potential employers. It is more effective, less time consuming and less expensive if the program director and his staff exert every effort to maintain sound working relationships with all their "active" employers at all times, and during good times they should not overlook expending time and effort on sound "missionary work" in job development.

Over-expansion of the co-op program

The administrators of a new cooperative education program should avoid over-expansion of the program and expand it only to its estimated maximum for moderate economic periods. Good advice is to go only 80% and put the other 20% of the time and effort into the refinements that improve the program, but that are expendable in difficult times. A business cannot operate soundly without provision for the years in which there may be a loss in sales; it would not plan that close to disaster. Yet, many co-op program directors do just this. A cooperative education program's ability to provide satisfactory and relevant job assignments, should be based on a market analysis of employers' needs, not on the optimistic statements of the teaching faculty directly involved in the discipline.

Failure to establish and to adhere to program standards

Many administrative pitfalls can be avoided when standards for the program's operation are established and enforced. Over the

years, it has been very evident that employers give preference to those cooperative programs that have sound basic rules and regulations which the students are required to follow as well as standards of program operation for their coordinators. When standards are non-existent, hazy, or ignored, employers cannot plan effectively and consequently, usually become disinterested in the students from such institutions.

Improper selection of a coordinator

It is usually a grave mistake to assign a faculty member to the coordination department staff because he is no longer needed in his academic department. The job of coordinator is a very demanding one; a number of different kinds of expertise are required to effectively perform the many necessary functions. It is difficult to find a person who possesses the social skills capable of providing meaningful interaction with employers, students, and professional educators and who also has the education and experiences required to effectively perform the many necessary functions. A coordinator who is inept, who is unable to cope, may bring disaster to his institution's cooperative education program.

Coordinator Responsibilities

WALTER F. THOMASON - Broward Community College - 1973

The cooperative coordinator has responsibilities to three separate, and often oppositional entities: the student, the employer, and the school.

Responsibilities to the student, the primary entity, are as follows:

- Through vocational guidance and personal counseling, prepare the student for a maximum gain from his cooperative experience.
- Place the student with an employer who will give him the best possible work experience. (Place is a misnomer; actually the student should place himself through a job interview and a personal commitment to work for a particular employer.)
- Keep in close contact with the student while he is employed to be sure that the experience is in keeping with the goals of the student.
- Assist the student with vocational counseling, academic advisement, and registration so that he maintains the best possible on-campus academic program.
- Understand the students' vocational and personal aspirations are subject to change, and be ready to cope with these changes.

Responsibilities to the employer are as follows:

- Be sure that the employer understands and takes advantage of the academic nature of the cooperative program.
- Supply the employer with qualified motivated applicants.
- Assist the employer with the establishment and operation of his cooperative program.
- Act as a mediator and input source between the employer and the school.
- Keep promises. Don't make commitments to employers unless you are sure that you, your students, and your school can live up to them.

Responsibilities to the school are as follows:

- Maintain the academic integrity of the program.
- Keep the administration informed as to the plans, goals, and hopes of the business and student community.
- Be a spokesman for the institution.
- Help bring about closer communication between the teaching faculty and employers.

Assuming that the coordinator lives up to all of his responsibilities to the student, the employer, and the school, he must be an educator, advisor, counselor, personnel officer, mediator, systems analyst, curriculum expert, manipulator, juggler, and a salesman.

In other words, he must coordinate.

JAMES TO GODFREY - University of the Pacific - 1977

The coordinator of Cooperative Education is a unique kind of educator. As the catalyst who creates the interaction among students, employers, and academia, the coordinator has responsibilities to all three groups. Thus, he must, on different occasions, represent each of the three groups to the other. For example, when recruiting employers, he must represent the school and the students. He represents the employers when persuading faculty and administration in the school to offer certain course work more than once per year so that a workable Cooperative Program schedule can be arranged and, also, when working with students to effect placement with employers. He must know and understand each of the three groups sufficiently well to perform his duties as representative when necessary.

Many of the institutional coordinators presently active have

come from the academic ranks. Some have had professional experience in industry and government; but, in my opinion, too many coordinators are, by background or preference, too heavily oriented towards academia and are either unable or unwilling to see, and represent, the employer's point of view. This is not to say that a coordinator with little or no experience in industry or government cannot be effective. He just has to work harder at getting to know his employers in order to effectively represent them. This extra effort will also help in relating Cooperative job opportunities to his students.

A coordinator must wear many different hats, and much has been written on this subject. New coordinators certainly ought to read this literature--especially Professor Charles F. Seaverns' A Handbook for Coordinators of Cooperative Education. All of the Coordinator's duties (as set forth by Prof. Seaverns and others) are important, but it should be understood that the largest part of the Coordinator's time and energy will be spent in placing students--that is, matching up student aptitudes and interests with available employment opportunities, and representing student applicants to employers in such a way that these students are hired. If this part of his job is done well, then the rest is easy and consumes little time and energy. If a student is properly placed--with an employer who has been properly "sold" on cooperative education, in a position that is related to the student's field of study, in work that the student has the necessary skills to handle but work that is also challenging and slightly "above the student's head" at least part of the time--then few problems will result. If this "ideal placement" is affected, then the student gains satisfaction from the job, gets increasing responsibility and greater technical depth each time he returns to work, grades improve, etc. It follows that the coordinator spends little or no time counseling on personal, academic, or career problems with such a student. Obviously, we do not always achieve the ideal, but we do in many, many cases, and it is important to strive toward more "ideal placements". The more successful a Coordinator becomes in placing students--which activity constitutes the major portion of his job anyway--the less time he will have to spend on the peripheral activities. Thus, the Coordinator should constantly strive for better knowledge and understanding of his employers, and the job opportunities they offer for students. (As noted above, this may require a considerable amount of extra effort for the Coordinator whose experience and natural tendencies are more academically oriented.) He should also seek to improve his evaluation of student abilities and interests so as to properly match student and job and achieve the "ideal placement" discussed earlier.

GEORGE H. MILLER - University of South Florida - 1972

The Cooperative Education Coordinator (or Director) at the educational institution has many responsibilities including the following:

Administration of the Program

- See that it is adequately funded through continued communication with your superiors. Get as close to the president as you can with the story.
- See that other areas of the institution recognize the Cooperative student as a full-time student when he or she is on a work/training assignment. See that the student is not short-changed because he is not on campus.
- See that the Cooperative student is aware of his rights as a full-time student even though 1,000 miles away from the campus on a work/training assignment. Health benefits, right to registration materials, catalogue, student newspaper, use of library, etc.

Recruitment of Employers

- Recruit employers who will be able to take the students your institution will be able to supply. No need to develop engineering openings if your institution does not have an engineering program.
- Have a planned program for communication with employers once recruited:
 - Newsletter
 - Visitations
 - Other--phone calls

Recruitment of Students

- On Campus
 - Via counselors/advisors
 - Via faculty
 - Via Registrar and Admissions Office
 - Via students
 - Information sessions open to all
- Off Campus
 - High School-guidance counselors
 - 4-year institutions, also via 2-year institutions when you accept their transfers
 - Programs before clubs, associations

Own Professional Development

- Through Organizations
 - Cooperative Education Association or one or more of the other professional organizations
 - State, local or regional cooperative or placement organizations
 - Personnel and guidance associations
 - Taking a course occasionally in area of guidance, career counseling, and/or administration
- Publications
 - CEA Journal
 - College Placement Council, Inc. publications

- Local, state, regional publications in areas of Cooperative Education
- Placement, Guidance, and employment
- Read the business pages or columns of your local newspaper and subscribe to local, state or regional business magazines.

Student Placement

- Information Period and Assignment
 - Getting information from student
 - Application form
 - Career Planning/Information Session (group session)
 - Individual appointment with coordinator/student
 - Delivering information to student
 - Career Planning/Information Session (group session)
 - Individual appointment with coordinator/student
 - Interview with employer (this information from employer)
 - Orientation Session before leaving for Work/Training assignment

In the application form the student may give information, as the form is designed, which may be helpful to the coordinator to review before the first appointment. The Career Planning/Information session is a group meeting to tell students what cooperative education really is. Group meetings save coordinator time. The individual appointment then gets at the student's goals and what he really wants in a career. This then leads to the interview and acceptance. Then the Orientation Session reviews the student's responsibilities and gives him tips on success on his assignment.

- On Assignment
 - Student's Response to Coordinator during assignment
 - Report form letting Coordinator know he arrived, his address, how to reach in an emergency.
 - Mid-Term Report - how is the student doing, does he have any complaints.
 - Housing Report - Information on student's housing that may be helpful to future outgoing students.
 - End of Term Report. Summary of his activities with recommendations how Cooperative Office or employer might make it better.
- Back on Campus
 - Interview with Coordinator
 - Will he be reassigned
 - Return to same employer
 - Be terminated
 - Or has student completed the co-op program

Following the interview the coordinator should notify the employer of the future plans, will the student return, etc., when, with any special recommendations.

L. GLENN O'KRAY - Henry Ford Community College - 1972

The counseling aspect of Cooperative Education is an important element for the success of the program as it relates to the student and as it relates to the employer.

The Cooperative Education coordinator has a role of assisting the student in determining his vocational interests. The coordinator's role then evolves to one of assisting the student in finding fulfillment through his cooperative employment. He makes occupational areas of employers known to his students.

The coordinator, in order to readily analyze the career orientation of the student, should be aware of the factors leading to career selection. Various vocational psychologists state the respective elements present in the process of career choice. They include social and economic class, home, school, environment, community, pressure groups, ability, geography, history, accident, error, emotional needs, and counseling. Some psychologists theorize that career selection is a situation of growth. Others indicate that man has many potentials which can reach fulfillment through various job patterns.

The coordinator has a responsibility to use all available tools to help the student determine the career direction which is best for him. The interview itself is a very important informational vehicle. Through the discussions with the student, the coordinator can to a degree determine the student's basic interest patterns, his likes as well as his dislikes. Academic and extracurricular interests are often indicators to vocational direction. The student can complete an interest form which will give the student's orientation as he perceives it. Faculty members and advisors can be of assistance. An evaluation by a faculty member will sometimes indicate a direction which might not be readily evident either through the transcript or the interview. A group counseling situation can be used to assist the student in bringing forth within himself a realistic appraisal of his career direction. Psychological testing is an additional tool which should only be used as part of a total package in assisting the student. The most widely used tests are the Strong and the Kuder.

Once the coordinator has some idea of the direction which a student should take, he has the role of presenting to the student the various areas of employment which can best fill his needs. This process can take many forms. One is through the occupational class. This cannot only help the student gain a knowledge of the occupational world but of himself as well. The coordinator can refer a student to other students who have already had work experiences in a mutual area of interest. Cooperative work reports are added sources of information. Another source of information is the expert in his field. A coordinator might have a reference list of professionals to whom he might direct students who think they have a mutual interest. Literature published by various employers can give good job descriptions. Various publications such as the Occupational Outlook Handbook can be of value. Most professional societies have information on their respective professions.

When the evaluation of the student is made with all the tools available and when the student can best determine for himself the areas of employment available to him, the best placement will result. When the employer meets the vocational needs of the students, both the student and the employer will find mutual satisfaction through the Cooperative Education Program.

Liberal Arts and Cooperative Education

PAUL DUBE' - Northeastern University - 1977

Those planning a cooperative plan on a liberal arts campus may want to consider a number of factors which will influence the program's development. These include:

- 1) The needs of the liberal arts student and their reasons for participating in cooperative education;
- 2) The role of career education and career counseling;
- 3) The nature of the employment program that will meet the needs of liberal arts students;
- 4) Employer views of the liberal arts students and graduates; and
- 5) Faculty involvement in the career development of their students.

On every campus we find there are a number of restless students who are "stopping out" of college to reconsider their present and future lives. They seem uncertain of their college purposes, unclear about their future careers, unconvinced of the usefulness to them of some of the best academic programs in the country. Students are seeking reasons to continue their education, through academic and career incentives. Because of the increased competition for graduate programs more of the graduates of these colleges look for work upon graduation and find it difficult to obtain. The college advertised economic advantages of a liberal education is an argument that is losing its force as the competition for promising entry-level jobs increases everywhere in the nation. Many of these men and women are stopping out to explore careers, test tentative career choices and/or gain experience. A third factor in the flight of some students is the simple urge to get away from what they feel is an enclosed and isolated world. We should recognize that these are not dropouts, rather, they take leave to find a clear purpose for continuing their education.

In addition to learning work habits and values and job getting skills, part of the students' preparation for cooperative work will include counseling to help them focus on areas of career interest which they might want to explore and the nature of the jobs that would serve as vehicles for this exploration. However, career

counseling and career education like other areas of education are seldom meaningful until applied and tested. Nor is it enough to send students out to work. Upon their return to the campus from their work experience counseling will be needed to help them fully recognize the implications of their work acquired learning for their career goals and academic program.

Jobs should be developed in those career areas of greatest interest to liberal arts students, and in which many find success after completing their education. These include: communication fields such as journalism, company publications, radio and TV; medicine and the health delivery system; law and the administration of criminal justice; ecology and environmental protection; science and social science research; business and industry; government; education and human services. The job development emphasis should be to provide students with opportunities necessary to gain career information, explore careers, test tentative career choices, and gain experience. Jobs need not be study-related. In cooperative programs for students studying the professions such as engineering, accounting, etc., the emphasis has been to provide study-related experiences. This is probably as it should be for most engineering students will become engineers as will accounting students become accountants. The same is not true of students in the liberal arts--especially those in the social sciences and the humanities. For example, only a very small percentage (perhaps 5%) of history graduates ever become historians and for the most part they are history professors in the nation's colleges. If this is the case, then most history graduates (95%) are in other careers and occupations. It would appear, therefore, that while study-related experiences are desirable, it may be even more important to develop cooperative jobs and place liberal arts students in occupations in which liberal arts graduates have found success after graduation.

Employers are often reluctant to hire liberal arts students because these students are not perceived as career oriented or as immediately productive as engineering or accounting majors. With a bit of imagination, persistence and selling, a meaningful employment program can be developed. For if we examine the qualities sought by employers when recruiting potential managers and administrators, we find they seek competencies that correspond very closely to the proficiencies of the liberal arts education. These generally include the ability to: communicate effectively, perhaps even with style; have an awareness and acceptance of the values of others and to comprehend the nature of interpersonal relations; analyze and think through a problem in order to accomplish a task; handle computations and the scientific method. What is to be promoted, however, is the education, not a series of courses. Those doing job development will need to know of employer needs so that they may relate the liberal arts education of their students to these employer needs.

The faculty must be sensitive to employer needs if they are to find ways of relating their teaching and their subjects to employer management requirements. This approach is not training for specific employers or even jobs, rather it is helping students to perceive their education as a whole rather than unrelated parts.

At first glance some liberal arts faculty may not believe they should be involved in the career development of their students. In at least one instance, however, and there are no doubt others, a deeper examination of students' career concerns led to a change in the view of faculty members. Somewhat over a year ago, twenty-five faculty members of the Venture colleges met to discuss the role of career education on the liberal arts campus. At the conference, the faculty asked each other hard questions about their jobs and their role as liberal educators. It became the consensus of the conference that a liberal education should concern itself with the students' concerns. The all-too-frequent contempt for careers and employment was in itself non-academic and "illiberal". Specific suggestions were proposed by a group of the faculty. These included: faculty leaving the campus to learn about careers off the campus; bringing executives from business and government onto the campus to explore ways of bridging the education-work gap; and to meet with recent and not so recent alumni to learn of their experiences in developing their careers.

Meaningful cooperative education for the liberal arts is both needed and feasible; with a little effort and imagination it can become a reality.

ROBERT C. PARKER - Antioch College - 1977

J. D. Dawson has stated that "A liberal arts curriculum should serve two major functions--it should provide broadening forms of education for students in all fields, from the fine arts to engineering, and it should provide a pattern of general and moderately specialized education designed for living and working in modern society".

Cooperative education in the liberal arts setting can and should provide for broadening and exploring opportunities as well as for specialized education. Liberal arts institutions are concerned with equipping their students to live effectively in a complex, ever-changing world. They seek to prepare students to understand problems within society and to equip them with skills, attitudes and understandings to assist in solving those problems. Opportunities afforded to undergraduate students in liberal arts institutions through the cooperative education approach speaks directly to those goals in that placement in the real world and in real working situations give students an increased awareness of the world around them and the problems which are a part of it. They are assisted in understanding those problems; they can begin to do something about them, even as undergraduates, and certainly with more effectiveness and validity as graduates.

The breadth of experiences afforded through cooperative education cannot be matched to a regular course of study carrying on exclusively inside the classrooms. Liberal arts cooperative education provides practical knowledge and experience to students which better allows them to deal with personal growth, vocational choice,

and career preparation in addition to testing specific educational academic theory. They are able to explore possible careers by testing, confirming or rejecting, and subsequently turning to new choices which can again be confirmed through subsequent work experience.

At the same time students become independent and live on their own while on the co-op job. They are able to observe differences in the ways of life of different groups of people representing diverse interests, different education and socio-economic levels, and cultural and geographical biases. They increasingly have a conviction to identify with people who have a higher education. They can better develop their own life style because of this opportunity to get better acquainted with new people, new places and the ideas of others. By living in a variety of places, earning their own living, they increase motivation, independence, responsibility and self-confidence.

The opportunity to test educational theory through formal practice is one of the obvious potentials in cooperative education for all students. It is here that the meaningfulness of what students study on campus is greatly enhanced through observation and experience on the job. Here is an opportunity for greatly increasing the range of associations which one may make, thereby increasing the exposure to new ideas through a wide variety of questions in different settings. This potential can only be realized when appropriate measures are taken to encourage thinking about studies while on the job and thinking about job experiences while on the campus.

In cooperative education students quickly mature and begin to feel at ease in being able to cope with the people and the world around them. The people, places, and settings which they utilize in cooperative education provide laboratory experience today for what will become their own real world after graduation. Whatever the model of cooperative education adopted by institutions of higher education, it should seek to provide:

1. Opportunities for career exploration and developmental experiences;
2. Opportunities for personal growth and understanding;
3. Opportunities for growth in terms of general studies;
4. Opportunities for specific growth in relation to academic studies.

Algo Henderson, former President of Antioch, has defined liberal education as "an education that tends to produce the liberated individual--the person who, because of his perspective and history and his critical observation of social dynamics, helps to facilitate needed change in the world." He believes that "a liberal education is an exploring education--that the student seeks wisdom wherever wisdom can be found--in the record of the past, in the accounts of contemporary experience and in his own participation in the world around him." Through a dynamic program of cooperative education in the liberal arts all this is made possible.

In one sense, Cooperative Education has always been a part of liberal education; in another sense, it never was until colleges and universities, inspired by federal funding, began consciously to look at Cooperative Education's potential for the liberal arts student. Cooperative Education began, for me, nearly a decade ago, when federal funding made an educational goal approachable. As a liberal arts dean, it had seemed to me that what provided a liberal education for the student was less what the student took than why he took it, that what liberalized him as a human was less what he was learning than the context of real life into which he could place what he learned.

Cooperative Education had not been traditionally associated with liberal arts students, yet all that had been of meaning in the tradition of liberal arts suggested that Cooperative Education placements could provide, for the major, the hard test of real life activity and, for the undecided student, a possible measure by which to make choices.

So Cooperative Education came about in the liberal arts college of which I was dean. It brought about what I thought it would. To some degree since, I have cited some from the litany of those achievements in the presentations I have willingly made, many places, evangelizing, to be sure, in behalf of Cooperative Education.

To try to compress a decade of affirmation into twenty-minute presentations has been difficult, if an enjoyable task. To try to compress twenty minutes into paragraphs is probably impossible. So a single point must do: In the whole history of higher education in the west, almost all details of which are incorporated somewhere, somehow, in one or more of American colleges and universities, Cooperative Education is the only thrust indigenous to America.

The component factors of western higher education apparent in American forms are many: lectures, seminars, labs, workshops, and so on. The Cooperative Education placement however, which offers serious work experience, generally alternating, more recently parallel, offers to this tradition an educationally value-added benefit as well. It offers the student the otherwise unavailable opportunity to reflect reciprocally on his study and his work. This represents a distinctively American contribution to the task which higher education has, particularly in the liberal arts, of helping students see, less what they are taking than why they are taking it, of realizing that what is liberalizing about certain learning is less the content than its view of the world.

At the moment, study in the liberal arts is under attack because researchers report that liberal arts graduates have more difficulty with employment and are paid less in any event. Other statistics show that cooperative education graduates are employed in greater numbers, liberal arts majors though they may have been. The axiom may apply that there are no unemployed teachers, or whatever, but only unemployed people. Life's diversities

and adversities may be such that the well-made plans of education produce graduates who are over-specialized and are often reluctant to learn, or are judged to be so. The Cooperative Education graduate seems to display that all he has or can learn helps him function adaptively in a fickle economic world. Whatever other goals a liberalizing education may have, none is higher. The benefits of the Cooperative Education experience can fill twenty minutes or almost a decade in telling. That it can liberalize the student and offer him the value-added characteristic of adaptiveness through real-life contexts is perhaps the most important. And it is this country's small piece in the future legacy of education in the west.

MARY A. MURPHY - Macomb County Community College - 1977

Professional life as a Liberal Arts Co-op Coordinator has been and continues to be a challenge. Having worked with developing Liberal Arts programs at both a four year and a two year college confirms with no uncertainty that Liberal Arts Cooperative Education:

- Is unique to itself.
- Is definitely unexplored
- Carries varied interpretations.
- Is confused with internships and clinical experiences.
- Has its validity questioned.
- Applies the traditional co-op model in a limited way.
- Is more successful with a modified co-op model.
- (If subject-related) faces the tightest job market.
- (If career-related) faces the most open market.
- (If a subject-related program) moves the slowest.
- (If a career-related program) can expand rapidly.
- Generates strong student interest.
- Provides the least career-oriented student with the epitomized realistic approach to career selection.
- Attracts either strong faculty endorsement and support or strong faculty opposition.
- Interests relatively few employers in a highly industrialized area.
- Engenders favorable support from innovative employers who have hired Liberal Arts Co-op students into previously unexplored areas.
- Commands either the most gratifying or frustrating experience for the three parties involved: student, employer, and coordinator.

In no uncertain way I have found that students welcome the opportunity to "test" a career or explore a career and thereby gain professional experience.

More faculty are becoming attuned to the career needs of Liberal Arts students. They legitimize the learning that takes place at the Co-op assignment. Some faculty, however, still opt to credit only the learning that takes place within the confines

of the classroom. It is this conflict of the learning/non-learning thesis that must be clarified and accordingly resolved since faculty support is critical for the success of the program.

Likewise, it takes a special type of employer who is willing to explore the possibility of hiring a Liberal Arts Co-op student into atypical positions within their organization. It also takes an interested supervisor to work with a trainee in a learning situation. These employers are the backbone of the Liberal Arts Co-op programs.

I learned very quickly that a "sales" approach was important in working with the students, faculty and employers. With few exceptions, Liberal Arts/General Education Co-op is a relatively new concept. Sales techniques enhanced my professional approach to presenting this concept. Employers seemed to relate only to technical, business or high school Co-op and were unfamiliar with the programs in Liberal Arts/General Education.

The programs that I worked with were study-related and reimbursed. This was in contrast to some programs that implement the panoramic concept and allow for paid and/or unpaid placements. The latter approach allows for a larger program that is more readily implemented.

In Liberal Arts placements the parallel program serves as an excellent option to the traditional alternating plan. However, whether implementing either the parallel or alternating programs, a model which includes a seminar conducted during the co-op experience was found to be most successful.

For coordinators developing a Liberal Arts program I would like to present two recommendations. It is extremely important to determine the goals and objectives of the specific program as they apply to a particular college. It is also helpful to keep in mind the variables affecting programs. Some of these are: definition of liberal arts co-op, goals and objectives, location of the college, support of administration and faculty, paid/unpaid positions; study-related/career-related placements; awarding of academic credit, evaluation criteria, and cost of the program.

This awareness will determine the parameters of individual programs. It will also enable one to understand the limitations of a "co-op coordinator load", which becomes very important to the total plan. Because of the variables involved, a blanket comparison of student-load is unreliable. If the goal is an extensive co-op program, the factors involved that determine this objective should be built into the educational work experience plan.

Some may take exception to the stated observations. However, having worked with the technical, business and Liberal Arts co-op programs, I have found that the Liberal Arts co-op program varies extensively from the traditional models.

A mix of appropriate and clear institutional goals, seasoned with a communication network for students, faculty, and employers, and sprinkled with unlimited patience will grow into a quality

Liberal Arts co-op program.

RUTH L. PATTISON - The Cleveland State University - 1977

The liberal arts student perhaps more than any other, can benefit significantly from participating in a co-op program.

Liberal arts co-op programs range from those that emphasize work experience that relates as closely as possible to stated career objectives to those programs that are simply designed to provide an experiential experience off campus. The benefits the liberal arts student receives from co-op relate directly to the institutional objectives of the program.

There is no question that most liberal arts students suffer from lack of clear-cut vocational goals, few skills and meager knowledge about the world of work, particularly the entry level opportunities available to the unskilled. Their unrealistic expectations and lack of sophistication in job seeking are formidable barriers to a smooth transition from college to the job world. It is assumed that many of the liberal arts students are not career oriented and it is on that basis that some of the experiential programs have been designed. Placement directors however have found that such students are really a rarity. Most liberal arts students are unaware that there are limited directly related options available for most liberal arts majors. The liberal arts student is fortunate indeed to participate in a co-op program that provides goal setting and life work planning techniques through counseling or course work followed by co-op jobs that are related to the students' selected career objective. These students approach graduation and job seeking prepared and qualified to meet employers expectations and needs.

There are problems, however, in designing and administering a liberal arts co-op program. Initially the philosophy and objectives of the program have to be set by the institution and the usual administrative decisions made that are a part of any co-op venture. One particularly important issue relates to the coordinator - student load since the liberal arts student requires more personal counseling and job development time on the part of the coordinator.

The special problems, however, are largely student related. Many liberal arts students vacillate between majors and a naive and lack of concern about career decision making differentiates these students from their more vocationally oriented peers. A great deal more time has to be spent counseling these students about the realities of the work world, about basic economics, about job/major field differences, and about the urgency for early research about themselves and career fields.

It is also more difficult to find employers and challenging assignments for these students and to meet employers needs for continuity and commitment. It is particularly difficult to convince business and industry that students without prior training

can "do a job".

The liberal arts co-op experience is genuinely exploratory in nature since there is ordinarily little similarity between course work and the co-op job itself. The experience not only provides an easier transition between school and work but is often instrumental in helping the student recognize a need for some specialized electives. Thus, the co-op job is truly a learning experience, not only of job skills and training but learning that better preparation is a prerequisite to a contributing role in the economy.

The liberal arts student is really liberally educated only when that education includes work--one of the most psychologically important aspects of life.

Despite the difficulties involved in administering a liberal arts co-op program successfully, the rewards are immeasurable to students and liberal arts coordinators as well.

WANDA B. MOSBACKER - University of Cincinnati - 1973

Although the category "non-technical disciplines" includes many majors in addition to those in the liberal arts, these brief comments will be limited to only the liberal arts cooperative education programs. The major difference in working with liberal arts students on cooperative programs (particularly the non-science majors) is that the college coordinator and the employer, more likely than not, are working with aspirations and interests rather than saleable skills. The more clearly defined career opportunities available to technical (and liberal arts and science) graduates give those graduates more direction; full-time career opportunities for liberal arts non-science graduates are still quite vague. However, even within the liberal arts non-science student group there is great variance in the degree of career-orientation and the farther a student is from the career-orientation motive, the more difficult it is to develop sophisticated relevant work experiences. Yet, these students with little or no career orientation can also derive great benefits from cooperative education. Unfortunately, many college administrators and faculty often expect that cooperative education programs will provide job opportunities for liberal arts undergraduates in situations that actually do not exist for liberal arts graduates, and so cannot be expected to exist for the undergraduate cooperative education students.

Although almost every college student is in need of some career counseling, a great deal more initial counseling is involved when working with liberal arts non-science students, both for clarification of goals and for bringing into the picture reality regarding the labor market, projected opportunities, etc. Off-campus supervision of the liberal arts student may also require more of the coordinator's and the employer's time, for the liberal arts student may experience a real "downer" when his assignment does not match his intellect. His employer may be aware of the situation but powerless to do anything about it until the student acquires an organizational background and develops some clearly

defined career goals.

The liberal arts degree usually requires far fewer hours in a major field of study than is the case for technical majors. Many students do not decide on a specific major until more than half way through their college program. Thus, conventional, career-oriented work assignments are less practical and more difficult to identify and arrange, because of the students' lack of major-area-orientation.

The descriptive material about cooperative programs also often creates problems. Phrases appear in the literature stating that the student's work assignments are directly related to his major and these statements are usually supported by illustrations of students on relevant assignments. Thus, even though the liberal arts student is unable to identify careers related directly to his major, he assumes they exist because he has read that he will be placed on assignments directly related to his major. When a liberal arts student has such misconceptions, the cooperative education program often loses credibility.

Very few employers in the profit and in the non-profit sector, can afford the luxury of serving merely as training centers, and liberal arts students, unsure of their interests and goals, often want to remain with an employer only long enough to gain a surface knowledge of the employer's operation. Also liberal arts students are often more interested in work assignments in the non-profit sector of our economy and such employers do not yet seem to have the same degree of knowledge of the values of cooperative education as the profit sector.

One fact is certainly obvious. While students in all majors require careful, individualized attention, most liberal arts students require more attention. Therefore, for any liberal arts cooperative program, the student/coordinator ratio must be low. It takes ingenuity, imagination, patience, and a great deal of effort to ferret out the job opportunities, especially for the non-science majors.

Perhaps, while every attempt should be made to fit the highly career-oriented liberal arts students into the traditional type of alternating program, at the same time, in order to be responsive to the liberal arts students who do not have career-oriented goals, there should be introduced more flexibility of scheduling as well as a recognition of resources for off-campus experiences that would not be approved in most traditional programs.

Cooperative Education in Community Colleges

ADA L. SALISBURY - Ashland Community College - 1977

The characteristics of Cooperative Education in Community Colleges have not changed significantly during recent years. Of

particular interest is the trend toward program expansion rather than new program implementation. (Survey of Cooperative Education, 1976, Sylvia J. Brown and James W. Wilson).

The following observations are made as a result of contact with training program participants and many on-site visits to two-year institutions:

1. Faculty members are more actively involved in the Cooperative Education process for various reasons:
 - a. Student contact is largely through faculty referral, orientation programs, general publications, and word-of-mouth.
 - b. Faculty members have greater opportunities to make off-campus student-employer visits when local placements are utilized.
 - c. Although the Cooperative Education Director/Coordinator is generally responsible for submitting grades (when academic credit is awarded), appropriate faculty advisors participate in the evaluation process.
 - d. The staff of the Cooperative Education Department frequently consists of the Cooperative Education Director/Coordinator and secretary whose responsibilities are to serve every department/division of the college. With this limited staff, faculty have assumed a more pronounced role.
2. The limited student population permits the faculty and the Cooperative Education staff to become closely associated with the students. The greater the knowledge of the student (needs, ambition or goals, abilities) the more effective the Cooperative Education Director can be in locating and developing the appropriate Cooperative Education placement.
3. A. The Community College is an extension of the community it serves, therefore, Cooperative Education is often the source for public contact. "Public image" is vitally important and feedback is necessary. Not only must the community support the college, but the college must be responsive to the needs of the community. The close monitoring of student placements and business community contacts can lead to course revisions, deletions, as well as institution of new programs.
4. The responsibilities of the Cooperative Education Director in Community Colleges are often all inclusive; counselor, advisor, mediator, professor, administrator and public relations representative. When working with local employers, the Cooperative Education Director is often questioned and expected to be knowledgeable about various college related issues; be it the theater productions, financial

aid, continuing education courses, sorority-fraternity functions, registration processes or student fees.

5. Cooperative Education job development and initial business community contact is primarily the responsibility of the Cooperative Education Director; although individual faculty often give direction to the Cooperative Education staff regarding student placement. Faculty basically view the director as having expertise in this area.

The success of Cooperative Education in many community colleges throughout the United States is largely due to faculty involvement and the utilization of local students in local placements. This does not negate the fact that placements external of the immediate service area are also excellent. However, commitment from the local community for the college's clientele provides an element of stability and support for program continuity.

HARRY HEINEMANN - LaGuardia Community College - 1975

Although the overall program objectives of cooperative education do not differ, the unique characteristics of the community college give rise to programmatic issues that are usually of lesser concern to the 4-year institution. The comprehensive community college offers transfer programs for completion of the baccalaureate degree, career programs that prepare students for immediate entry into the labor market upon graduation, and extensive credit and non-credit programs for the adult population in the community. Generally speaking, students at a community college are older, more representative of the ethnic distribution within the community being served, and come from a lower/middle or lower income background. It is the learning potential of this non-traditional approach to higher education that has attracted the attention of so many community college educators.

The question of placement patterns is one such issue. Considering the difficulties of incorporating necessary course requirements within two academic years, it is understandable why the vast majority of community colleges have adopted parallel placement programs. The parallel format enables students to maintain a full-time course load while being involved in cooperative education through a part-time work placement. A number of two-year colleges, such as the Borough of Manhattan Community College in New York City, have developed an extensive and successful parallel program. Moreover, it is argued by some that the parallel program provides a better educational format since it provides the opportunity of closely integrating the cooperative education field experience with the student's classroom work. The parallel format does present difficulties that must be considered. First, students, in all likelihood, must be block programmed in order to open the time for them to accept a cooperative education assignment. With the cooperation of the faculty, this program can usually be resolved. Of greater concern is the necessity of having sufficient numbers of employers located within a reasonably short commutation time from the college. This factor may be a major problem for colleges not located in

urban centers or without extensive public transportation facilities. This constraint could very much affect the numbers of students that can be accommodated in the cooperative education program. Setting aside the issue of relative advantages and disadvantages of the full-time, alternating format as compared to the parallel program, the full-time cooperative education format does tend to lessen geographic constraints. It thereby increases the numbers of companies that can become involved, as well as the types of placements that can be developed.

A two-year college, considering the full-time, alternating placement model, must look towards a year-round calendar. For institutions on a semester calendar, this may not be as difficult as it first appears. With the comprehensive calendars that most institutions now operate, it is possible to view the summer as a third semester. A cooperative education program, allowing for year-round placement on a tri-semester basis, is feasible - should a college, weighing the pros and cons, decide to adopt the alternating format.

The greater numbers of adult students at the community college probably explains why many cooperative education programs at these institutions developed initially for part-time, evening students. The California Community College system has taken the leadership in this approach. Cooperative education is conceived of as the educational process linking the individual's work experience to their educational and/or career objectives.

Job development is usually not as formidable a task as many new program directors might believe. In fact, most community colleges have existing relationships with the employer segment of the community through the members of the Board of Trustees, establishment of curricula advisory groups, and through the efforts of the Continuing Education Division. The experience of the vast majority of two-year institutions would indicate that many employers are more than willing to establish cooperative education work slots for students from the local community college.

Many community colleges have established preparatory programs which students must take prior to placement. Topic areas, such as introducing students to cooperative education, sharpening those skills necessary to obtain a position, are usually included.

Other issues, such as organizing the program, relating the experience to educational outcomes, evaluation and grading, relationships with teaching faculty, financial support, confront any institution developing a cooperative education program. The programmatic responses to these issues may not be very different at the two-year college. However, when developing a cooperative education program at a community college or, for that matter, at any institution, it is a foregone conclusion that the program should be developed to meet the needs of that particular institution.

WILLIAM A. STULL - Utah State University - 1977

Since 1970 the largest growth of cooperative education has been at the two-year college level. In a 1976 national study conducted by Brown and Wilson it was estimated that 460 two-year colleges were involved in cooperative education. Contrasted with an estimated 80+ programs in operation at this level in 1970, this represented more than a 70% increase in the number of programs in operation in a short six year period.

Cooperative education programs at the two-year college level have grown for a number of reasons. Some of the more important reasons include: (1) the community center (oriented) nature of the two-year college; (2) the fact that the majority of two-year college students work while they attend college; (3) the availability of federal financial support (both Vocational and Higher Education funds); (4) the growth in numbers of two-year institutions and the corresponding increase of students in attendance; (5) the responsiveness of the two-year college to meaningful innovation; and (6) the large number of adults who are returning to college to improve their skills and upgrade their positions.

The two-year college has developed and is continuing to develop a unique model for cooperative education which draws from the best elements of the "Vocational Education Co-op Model" and the "Higher Education, General Cooperative Education Model". As the two-year college model evolves and develops, its distinguishing features come into focus. Program features which show variance between the two and the four-year model which lend themselves to comparison include program purpose, types of students served, types of employers participating, sources of federal funding available, institutional organizational placement, academic credit policies, types of calendars utilized, extent of student trainee supervision, utilization of training plans and agreements, utilization of advisory committees, availability of co-op to students, and the function of the coordinator. Following is a comparison between two and four year cooperative education programs:

FEATURES	TWO-YEAR COLLEGE	FOUR YEAR COLLEGE
Program Purpose	Usually career related--designed to develop knowledges, skills, and attitudes required for employment.	Not necessarily career related--designed to stimulate student's intellectual, career, and personal development.
Types of Students Served	Typically less academically talented than four-year counterparts. More career oriented. Require more supervision.	Opposite--typical profile of four-year college student.
Types of Employers	Participating employers are generally local. Tend to be medium and smaller employers. Formalized in-house training program unlikely.	Employers more regional or national, larger employers, likely to have formalized training.

FEATURES	TWO-YEAR COLLEGE	FOUR-YEAR COLLEGE
Federal Funding	Vocational Education Part B and G money. Title VIII money	Primary Title VIII money
Organization	Tendency for co-op activities to be decentralized.	Tendency for co-op activities to be more centralized
Credit	Generally more liberal in amount of credit granted.	Smaller amount of academic credit granted.
Calendars	Primarily parallel type calendar with increased emphasis on alternating.	Alternating type calendar.
Extent of Trainee Supervision	More supervision and coordination required.	Less need for supervision and coordination.
Training Agreements	Frequently utilized because of quality of employers and requirement for funding.	Not frequently utilized.
Advisory Committees	Frequently utilized	Not frequently utilized
Program Types	Few mandatory programs. Mostly optional.	Larger number of mandatory programs.
Coordinator Function	Coordinate job training in area of student's career objective with class studies designed to increase vocational skill development.	To provide a variety of work experiences in response to student's needs (personal, career or intellectual).

As cooperative education continues to develop at the two-year college level new elements will undoubtedly be identified, while existing ones come into clearer focus. Without being tied to the traditional secondary or higher education co-op models, two-year colleges will have an outstanding opportunity to maximize the impact of cooperative education on their students and communities. Additionally, with the guidance of historical perspective and leadership from experienced coordinators, the quality of cooperative education at the two-year college level will become evident.

PAUL GOULD - Macomb Community College - 1977

When I graduated from college, I thought that all the doors of fame, fortune and opportunity would open up to me with that wave of my magic piece of paper, my degree.

During my academic career, everyone I came in contact with

assured me that the magic paper, a pleasant smile and a neat appearance would take me along the road to achieving that career commonly referred to in the trade as Design Engineer.

WAVING THE MAGIC PAPER

Then came that eventful and long awaited day, the interview with that well known and much feared human being, the most dreaded man in the drafting room, "The Chief Draftsman". "Come into my office", he said, as he pushed aside a mountain of paper. There I was, at his mercy; "Well, son", he said, and with that I shuddered to think of what was next. "Tell me about yourself", he said, which I promptly and elegantly did, observing every facial expression in his tired face. Despite my nervousness, I presented myself in the best possible way I knew how as was set forth in the book, How to Get the Job You Want. Things were going well, or so I thought, until he asked about my experience in the profession. "Experience", I said. "What kind of experience?" I had worked at the local drug store, the newspaper route, and an odd job in the summer. And, to top off that reply, I waved the magic paper in hopes that he would say you're in.

No such luck, for I needed to have that requisite (as they say in the trade), board exposure. "What this company needs, young man, is a person with three to five years experience together with your magic paper".

I was rejected, dejected, and set back on my heels. My magic paper didn't do the job.

STUDY WHILE YOU WORK

What everyone wants, and in most instances is not willingly given to the newcomer, is the opportunity to gain experience in the profession. This is where many of the educational institutions have moved to the forefront and have developed programs to meet the needs of industry. Via the means of Cooperative Education, a student in a community college can have his cake and eat it too when choosing his or her profession.

The cooperative method of education has as its theme the integration of formal classroom instruction coupled with on-the-job experience. It provides a system of industry and education working together to produce a well educated, well trained and professionally developed worker who can say yes to both questions, experience and education.

This cooperative method of education, which Macomb County Community College, located in Warren, Michigan, has been employing, has yielded a great deal of success for the past six years. Warren is commonly referred to as the Design Center of the Automotive Industry.

The program operates on a schedule of starting with one year in school, followed by alternating a cooperative experience for six months of full-time work experience with a term of school. The end result is an Associates Degree of Applied Science, a Certificate of Cooperative Education; but, most important, the magic

to open the doors is one year of industrial experience in industrial drafting and design. This type of actual work experience prepares each student more than any other study program.

Oh, yes, the end to the story or should I say the beginning-- the young man got a drafting position with another firm. However, in doing so he realized that maybe he should do something to see that others profited from his frustrations; so he became what is commonly referred to in the educational profession as a Coordinator for Cooperative Education.

PART V. ACADEMIC CREDIT FOR COOPERATIVE TRAINING EXPERIENCE

S. B. COLLINS - Drexel University - 1977

In past years academic credit for the cooperative work experience was almost unheard of. Either no credit was given or the work experience appeared as a graduating requirement.

At this time, with the great number of colleges new to cooperative education one observes that most of them are entering the program on the basis of granting academic credit which appears on the college transcript as any other college course would. This is undoubtedly good for many reasons:

First, it establishes the validity of cooperative education in a truly educational sense and the attendant willingness of the academic community to recognize it for what it is.

Secondly, it is more likely to have an important influence on the cooperative student as students tend to be careful of grades and transcript information and the granting of academic credit would cause them to be a little more serious about their activities as cooperative students.

Thirdly, accrediting agencies are becoming aware of the existence and educational values of cooperative experience, and, when such experience appears on the transcript in credit form this will enhance the values of such a program.

Fourthly, it is entirely possible that the college faculty can become more involved in the cooperative program if academic credit can be given as more opportunity may be present for them to participate. This can take the form of reading the student's industry report, bringing out cooperative experience in the classroom, etc. One danger of faculty involvement is that they may attempt to become too involved if the responsibility for placement is in the hands of another party such as a coordinator, particularly in required cooperative programs where all students must be placed. In such programs inevitably some students with lesser qualities will be placed in employment which does not compete favorably with the employment offered to more able students. In this instance it is hoped that the faculty member will not sit in judgment on the job held by the student when they do not have full information on the total background of the problem.

One of the present weaknesses in the granting of academic credit at this time is the variation in the amount of credit granted by different institutions. Together with this disparity there is a great deal of diversity as to student responsibilities in the matter of establishing the credit. This may be of little moment as long as accrediting agencies are not concerned about it.

Much has been said about awarding credit for the cooperative educational experience and today we have a proposal relating to the grading of cooperative industrial assignments which has been accepted in principle by the American Society for Engineering Education. While the proposal represents a great deal of progress in the recognition of cooperative education as an academic experience, it is only a beginning. The full potential of cooperative education will not be realized or appreciated by university students, faculty and administration, until a significant amount of credit is granted for this experience and the grading is such that it will have an impact on the student's grade point average. Until cooperative credit can make the difference between a student graduating with or without honor it has not achieved its full recognition. This goal negates the present proposal regarding one-credit courses and pass-fail grades.

Before a university can become extravagant with the awarding of credit, certain criteria must be met:

- Only the faculty of a school or college can grant credit for academic work. If cooperative education is to be a truly academic experience, then the faculty will have to become involved in the cooperative experience in a more than superficial way. (In this context, faculty is meant to mean the total teaching staff and not a few specifically designated professors.)
- Students cannot be passive and merely perform well in their industrial assignments, but they must be perceptive and seek to extract real learning in disciplines other than engineering from situations they encounter.
- The evaluation of the effectiveness of cooperative experience must be made by a consistent set of standards. This implies that while the industrial supervisor should make inputs into the evaluation procedure, the final judgments about the student's growth and development must be made on the campus where he can be compared with his peers.

There is a commonly accepted fallacy about cooperative education that must be recognized if it is to be a truly academic experience. Emphasis is usually placed on physical things. Students vie to go to the best equipped laboratories or work with the most modern equipment. The educational value associated with this preoccupation with technology is limited. It is possible for a student to squander a whole cooperative period on a testing program and the accompanying statistical analysis of data which only has educational value during the first few days of work. Associated with this emphasis on the technological sophistication of a specific cooperative experience is the dilemma coordinators face in trying to evaluate two students: one who worked at a modern, advanced research installation and another who was assigned to a stable, slow-moving production facility.

The best place to teach technology is in the university. There the faculty can strip away hardware and gingerbread

and uncover working principles that will serve the student when present technology becomes obsolete or radically changed. What cannot be taught in the classrooms or academic laboratories are people and managerial systems. They can be only simulated in very poor, unsatisfactory ways in the classroom. The cooperative experience on the other hand offers engineering reality; not only the technology but all the human systems with their capabilities and shortcomings which either give life to the technological system or render it less than fully effective.

The successful engineer will have to function in the human system in the plant, and later in life will have to manage both the technological and the human systems in concert with others. A truly academic cooperative experience is one in which the student's attention is focused on the human or managerial orchestration of the activities going on about him and not only the particular intricacies of an electrical circuit or a control system, important as they may be.

A cooperative work assignment should be similar to a reading assignment in a text. Just as reading material must be discussed, analyzed and shared in the classroom, so it is appropriate that the cooperative assignments be treated in a similar way in order to determine and evaluate the student's understanding of what he experienced. Each engineering faculty member should conduct a seminar composed of fifteen or so students from different departments and at different levels of cooperative progress. Included can be those students who are yet to receive their first cooperative assignment. The latter should be auditors and passive observers in the seminar.

Each cooperative student conducts a seminar session in which he describes the company, division and section in which he has worked. The session should be preceded by a written report. He should explain how he fits in the company's table of organization; how he relates to professionals and non-professionals; describe the managerial talents and sensitivities of his supervisors up the chain of command; relate some actual human relation incidents with his critique of what did happen, what in his opinion should have been done and the uncontrollable circumstances that contributed or detracted from a desirable conclusion. The class should question the opinions expressed by the student conducting the seminar to the point that he could be evaluated by them.

With this treatment of the cooperative work experience the technical sophistication of the assignment is not a factor in the evaluation. The faculty is intimately involved in a significant way and the human factors in the engineering situation are woven into the educational program. In the seminars, special inquiry can be made into the "personality" and "management styles" of each company not so much to establish a preference of one over the other, which usually comes out of non-objective bias, but to understand that there are differences and each has its advantages and disadvantages. Moreover, in the classroom, inquiry can be made into the characteristics of supervisors and executives in an informal study of the psychology of leadership. The students can learn from their shared experiences how local and company-wide politics

influence the engineering enterprises and the projection can be made into the civic arena to develop an appreciation of the impact of governmental politics on urban and regional engineering.

With this kind of a cooperative program, the student with cooperative experiences will undoubtedly have a richer and fuller education than the student in the simple academic program interspersed with work experience during summer vacations.

To raise this proposed scheme to a high academic level and have it taken seriously by the students, faculty, administrators and companies, three credit hours should be assigned each cooperative semester and a full grade of A, B, C, D or F granted after the completion of the seminar following the student's cooperative training assignment. At the University of Detroit this would mean that a cooperative student could earn from nine to twelve credits during his undergraduate work for his cooperative assignments. These grades, high or low, would have a significant impact on his grade point average and it is recommended that the seminar be graded as stringently as any other class. It is not recommended here that cooperative credit should replace technical elective credit. Students need all the academic work they can get. On the other hand, the grading system proposed here could enhance the grade point average of the serious student who took cooperative education as an overload in those schools where the program is optional. His transcript would be more impressive than that of a non-cooperative student.

Conducted properly, cooperative education can provide the kind of education that will never become obsolete as the engineer progresses through life.

WANDA B. MOSBACKER - University of Cincinnati - 1973

Dr. Asa Knowles, President of Northeastern University stated: "If cooperative work experience is well designed and administered as an integral part of the educational program, then it merits recognition as part of the degree."

Dean Lawrence Canjar, Chrysler Professor and Dean of Engineering of the University of Detroit commented that: "The full potential of Cooperative Education will not be realized or appreciated by university students, faculty, and administration until a significant amount of credit is granted for this experience and the grading is such that it will have an impact on the student's grade point average. Until cooperative credit can make the difference between a student graduating with or without honor, it has not achieved its full recognition."

In January, 1971, the Joint Committee of CEA/CED on Academic Credit approved the following recommendations as a general guideline, which were also supported in principle by ASEE's Executive Board:

- Institutions providing cooperative education experience to their students should grant academic credit for these off-campus assignments under the following circumstances:
 - The student completed all required off-campus cooperative educational assignments in his specific program.
 - The student submits a final written report to the educational institution after the conclusion of the final work period for consideration for academic credit.
 - Evaluation will be on a pass-fail basis.

A recent survey of 200 cooperative institutions revealed that of the 78% that replied, 58% said that they award some type of academic credit for off-campus work experience. The number of credits that could be earned in a term varied from 1 to 9, with the total non-additive credit ranging from 3 to 27. Also, a recent poll of student opinions and of employer opinions indicates that academic credit is favored by a large majority.

It is predicted by reliable sources that the granting of academic credit for cooperative work will be the practice in almost all participating institutions of higher learning within five years. Therefore, any institution which is in the process of starting a cooperative program should strive to include a provision for granting credit in its initial program plan.

Diversity of rationale, methods of evaluation and awarding of credit, while reflecting healthy and vigorous differences of approaches, increase the difficulty of determining the best plan for granting credit for cooperative work as a new program is being launched. Some of the questions that would need to be resolved are:

- Should the credit earned through cooperative work be allocated on the same basis as academic credit or on a separate system of credits--such as degree credit rather than academic credit?
- Should the credit be non-additive in relation to baccalaureate degree requirements?
- Who should be responsible for granting academic credit? The coordination faculty? The teaching faculty?
- Who would determine what off-campus experiences are acceptable for credit?
- What should be the basis of the evaluation? The off-campus experience? The employers' evaluation? A major paper? Student reports? Seminars? Number of hours worked? Collateral reading? Courses taken while on practice period either at the student's institution or another institution?
- What kind of grade should be given? Pass/Fail? A letter grade? Satisfactory/Unsatisfactory? Credit/Non-Credit?
- When is the credit to be awarded? At the end of each satisfactory completed program? In a lump sum at the end of the final practice period?

PART VI. FACULTY AND PUBLIC RELATIONS

WANDA B. MOSBACKER - University of Cincinnati - 1973

One difficulty encountered in cooperative education programs has been the lack of support and even outright hostility on the part of some teaching faculty members and administrators to cooperative education. The reasons for this opposition are varied but often stem from a devotion to the traditional pattern of education. There is a reluctance on the part of many faculty members to teach on a twelve-month basis; most want to have the summer free for other activities. Many desire to write, do research, or pursue some academic personal development during one quarter of each year, as has been the tradition. Teaching faculty members also dislike the repetition of the course materials as is necessary on cooperative education schedules. Many faculty members have led sheltered lives quite different from those in which most students in their classes will be involved; they have not experienced the world of work as most citizens experience it, and, therefore, do not place much value on the application of theory to practice. Also some teaching faculty members have a tendency to be smug about their college education which in almost 100% of the cases followed the traditional pattern, not the cooperative plan, and their smugness tends to produce a negative attitude toward the cooperative education concept. While in many instances cooperative work experiences confirm the student's choice of a career, in some cases they cause students to transfer out of the discipline; a move which is often not looked upon favorably by the faculty of the initial discipline. They tend to regard this move as a disservice to both the student and his discipline.

It is vital that the entire teaching faculty be wholly committed to the cooperative plan in order to ensure its continuing success. Those who are not wholly committed have been known to cause morale problems among their colleagues as well as among the students. Faculty members who give strong support to such programs as "University Without Walls", "Independent Study", and "Foreign Travel", continue to reject cooperative education. Yet, cooperative education is innovative, relevant and student-oriented through its individualization of the educational process as a whole; it results in low attrition rates. Such claims cannot be made by other forms of higher education that receive their unquestioning support.

Many faculty members who are critical of cooperative education at the outset, do, in time, become enthusiastic supporters. Many feel that there is value in the cooperative education system if the student's experience is directly related to his discipline. A concept that needs to be clarified and promoted strongly with the teaching faculty, however, is the value of relevant, but not necessarily discipline-related, experience.

It cannot be emphasized too strongly that the commitment of the teaching faculty to the concept of cooperative education is a prime requirement for a successful program. It is important to strive constantly to develop and maintain faculty involvement in the program. Some types of institutional organization for

cooperative programs lend themselves more readily to good faculty communication than others. Although a centralized operation has many organization advantages, constant communication with the teaching faculty is more difficult. A very conscious and continuing effort must be made to maintain good communication with the teaching faculty in a centralized organization. In most institutions communicating is facilitated when the coordinators have faculty rank and serve with equal status on college, departmental, and university committees.

At the University of Cincinnati, where we have a centralized operation, we must constantly strive to maintain good communication with the teaching faculty. We encourage them to come to our offices to have coffee with visiting recruiters or to talk over with our coordinators any matter that is causing concern. From time to time, our coordinators invite teaching faculty members to accompany them on company visits. However, conflict with class schedules often presents a problem. Even though interested in making such visits, the teaching faculty members are very limited as to the number of company visits they can make with the coordinator. Early each autumn we arrange comprehensive orientation periods for new teaching faculty to explain thoroughly the details of operation and the benefits of cooperative education.

In the spring of each year at a Recognition Awards luncheon one student in each major is honored for outstanding achievement in fulfilling the program requirements. Several employers with superior programs are also recognized at the luncheon. All faculty department heads and top administrators are invited as guests to the luncheon and it is felt that this luncheon provides another excellent means of fostering good communication with the teaching faculty. It would be desirable to invite all faculty members, not only the department heads and top administrators, as guests, but a restricted budget prohibits this.

In still another way, we have involved the teaching faculty in our Program. One department head from each of the three participating colleges serves on the (Cooperative Education) Standards Review Committee, a committee responsible for the just, educational, and sympathetic actions and solutions concerning the students and their association with the cooperative program. Serving with the three teaching faculty members, are three student representatives, and three members of the cooperative education faculty. Having representatives of the teaching faculty on this committee has helped tremendously in developing understanding of the kinds of problems that are encountered and in providing feedback through the faculty representatives on the committee to other college faculty members in their colleges.

Each quarter, a copy of the employer's description of each student's responsibilities as it appears on the employer's appraisal form, is sent to the student's department head, who, in turn, circulates it among his faculty members so that all faculty members have current, accurate information concerning the student's practice experiences.

The tremendous increase during the past decade in the number of institutions of higher learning, some of them very prestigious

institutions, now offering cooperative education, is helping greatly to change faculty attitudes and to improve faculty relations. The professor who is totally unfavorable to the concept of cooperative education is becoming more of a minority and this minority should continue to shrink even further in the light of the recent very favorable recommendations made by three national higher education groups in support of the combination of work experiences and formal study: The Carnegie Commission Report, The Report of the Assembly on University Goals and Governance of the National Academy of Arts and Sciences, and the so-called Newman Report on Higher Education.

However, no cooperative education staff can rely totally on outside influences to bring about faculty commitment. Constant effort must be expended in keeping all teaching faculty and administrators informed about and involved in the cooperative education program.

ROBERT B. AULD - Cleveland State University - 1973

In my estimation anyone wishing to understand the problems encountered by a department of cooperative education in its relationships with the administration, the faculty, and the students of the college or university could do no better than to make a careful study of Niccolo Machiavelli's The Prince. Perhaps Aristotle's Politica might also be helpful. For the name of the game in modern colleges and universities--as in all human institutions --is POWER.

Machiavelli says, for one thing, that "...it is well to seem merciful, faithful, humane, sincere, and religious, and also to be so; but you must have the mind so disposed that when it is needful to be otherwise you may be able to change to the opposite qualities." Does this remind us of administrators, faculty members, or students we have known? Does it remind us (heaven forbid) of ourselves? For Machiavelli also says, "One must...be a fox to recognize traps and a lion to frighten wolves."

Some cooperative education programs are fortunate in having administrations completely sold on the value of cooperative education. If the president and board of trustees thoroughly approve the plan, that is half the battle. But cooperative education is inevitably only part of their interest. Others in the administration are entrusted with the promotion of other facets of the educational operation, and it is natural that conflicts may ensue. It is the role of the director of cooperative education to recognize these conflicts and do his utmost to present the case for cooperative education in an effective and persuasive way. I would suggest that the first duty is to learn to recognize an S.O.B. when he sees one and then learn to live with him if that proves possible. If that proves impossible, the fat is in the fire and a battle is inevitable. In the heat of such a battle it might be well to recall the words of Danny Kaye: "The higher you

bounce the buck, the longer it takes to come back to you."

In dealing with the faculty we must remember that it is usually organized in departments, each of which is intent on its own growth. If given an opportunity to see what cooperative education does for the student, most faculty members can be won over to an enthusiastic endorsement of the program. But the academic department is often plagued with budget problems, and it frequently happens that the acceptance of a satisfactory alternating cooperative schedule runs counter to the department's desire for economy. So the cooperative department is faced with a selling job, and this points to the importance for all coordinators to become well acquainted with all faculty members in the departments they handle.

Colleges and universities vary greatly in their attitudes toward students. Some retain the traditional magisterial stance which relegates the student to a position of a small one who must do what he is told. Others elevate the student to an important position which enables him to threaten the autonomy of the administration itself. And, of course, one can find all degrees of gradation between these extremes.

Cooperative Education is student oriented. It exists to serve the student (as all educational programs should). It can be dictatorial in its operation, or it can be foolishly permissive. I believe, however, that the most effective programs are those which utilize to the utmost the help which student inventiveness can offer.

Probably the best method of capturing the potential of student thinking is through the organization of a student cooperative council or student cooperative board. Obviously such a council cannot be permitted to usurp the prerogatives of the department itself. On the other hand, its usefulness is nullified if it is not permitted to have a real voice in determining policy.

When one thinks of politics, one can think of practical wisdom, of prudence, of shrewdness (in a good sense), of diplomatic dealings. On the other hand, one can think of craftiness, of unscrupulousness, or acts prudently or artfully contrived for personal or partisan gain, or expediency, or scheming opportunism.

I hold, however, that the director of a cooperative program (and his staff as well) should endeavor as far as possible to adhere to a course of understanding, far-seeing principled conduct. To the degree that he is able to do this, he will rise above the status of a politician to that of a statesman. Perhaps with practice he cannot only maintain the appearance of being merciful, faithful, humane, sincere, and religious, but actually be so as well.

A few points that are important:

- The director of a cooperative education program must understand the administration and be ever ready to press for the needs of his program in an effective and persuasive way.
- While appreciating faculty attitudes and the reasons for them,

he and his coordinators must work constantly to keep department heads and professors aware and persuaded of the value of the co-op program for their students.

- The program needs the help which student inventiveness can offer, and the best way of capturing the potential of student thinking is through the organization of a student cooperative council or board.
- The director of a cooperative program and his staff must first of all be deeply aware of its potential value, and then, in their conduct of the program, they must adhere to a course of understanding, foresight, and high principle.

S. B. COLLINS - Drexel University - 1977

In a centralized system of cooperative education the Department of Cooperative Education will exist as a separate arm of the institution, seemingly isolated in its activity. It becomes a question as to how it is related to other departments or persons in the college and what their views of the program might be.

When the National Commission for Cooperative Education was formed in the year 1962, they quickly found out, as they traveled about the country, in their goal of increasing the number of colleges offering cooperative programs, that there was a substantial amount of faculty resistance to the idea. In too many instances the faculty held a negative view of the process and did not regard it as having educational values for the students.

As such, it behooves the Office of Cooperative Education to regularly inform faculty about the objectives of the cooperative program and in some sense prove to them that work experience related to academic background is indeed valuable to the educational life of the student. In this manner their support can be won and they can become believers in the system.

There are a number of means available to do this. A faculty member might spend a prescribed period in the Cooperative Department either acting as a coordinator or at least observing the process. They could accompany the coordinator on an employer visit. They could be readers of the report which most cooperative students write at the conclusion of the work block. A Co-op Newsletter could be created by the Co-op Department for circulation to the faculty as well as employers and any other interested or participating group. Lastly, their cooperation can be enlisted by the department in helping to supply employment leads which most cooperative departments sorely need. Some faculties have excellent contacts in industry and by becoming participants in the cooperative plan many of them can develop new contacts which could even benefit the faculty member if he is interested in consulting.

Other public relations aspects of the cooperative program

generally refer to employer relations or perhaps to that community of high school students that the college is attempting to attract through the offering of cooperative programs.

In the latter case a strong liaison would have to be made with the office of Admissions as they went about in visits to particular high schools representing the program. It is well that the program not be oversold to these students as perhaps they will not end up with the quality of employment, or even any job, when the time comes for placement. At the same time the offering of a cooperative program can be very attractive to a certain group of students and can be the paramount reason for selecting a cooperative institution. This is particularly true for those institutions with mandatory programs.

Employer relations will be a never ending job with most cooperative programs. For newly formed cooperative programs it would be well to give the program as much publicity as possible through employer group functions, broadly based letters to employers advertising the start-up, calling upon alumni in various places to assist you in particular organizations and the placement of a good advertising piece wherever it is applicable.

In the final analysis there is no better approach than a personal visit to those employers who may be targeted as places of employment for the students. Communications by visit, phone or correspondence will always be an essential and ongoing part of a healthy cooperative program which is operating successfully. Ultimately, the students you have placed and who have earned a reputation as excellent employees will be your strongest evidence of the value of the program to the employer. It is hoped that his past experience and success with such students will create a sustained participation on the part of the employer.

JAMES F. VICKREY, JR. - University of Montevello - 1977

IDENTIFYING TARGET GROUPS: Assuming a well-defined Cooperative Education Program with appropriate objectives, the first step in promotion is identifying key target groups--or the various publics of the program.

Every Cooperative Education Program has internal and external publics. Internal publics or target groups include (1) the staff and students of the Cooperative Program itself and (2) the trustees, faculty, staff and students (prospective, present and past) of the university at large.

External publics include (1) the employers of Cooperative Education students and (2) members of the business community and public at large, including key members of the various media and special groups such as the local legislative and Congressional delegations.

SELECTING AND UTILIZING APPROPRIATE STRATEGIES: The number of

available strategies for communicating with these internal and external publics is limited only by the fertility of our imaginations. The following strategies, approaches or uses of selected available media have been utilized at many institutions and are included as examples of the possibilities. Most of them are appropriate for reaching both external and internal publics.

The Press-Print and Electronic Media - 2nd Publications

The media used for promoting the institution itself may be well used to promote Cooperative Education, which in turn provides impetus to institutional relations.

The public press in general may be used to present studies covering Cooperative Education and the development of new programs. To that end, you should get to know the Feature Editor, Business Editor, and any other editor you believe would have a special interest in a story.

Weekly and hometown newspapers are especially receptive to stories describing the unusual positions held by Cooperative Education students. Not a shotgun approach but a personal note with a release to an editor about someone from the area is often useful.

Editions of employer publications including magazines, newspapers, and newsletters usually welcome stories describing the Cooperative Program and the students involved if they are working for the employer--especially if they are sons or daughters of long-time employees.

Radio and television representatives like stories of Cooperative Education. Many stations will use public service announcements to tell of Cooperative Education and its opportunities. While radio will usually limit a program to 15 minutes or less, a number of television stations have found a place for a half hour program on Cooperative Education. Campus radio and TV stations should not be neglected in this regard.

In dealing with the press, you should always work through your university's PR office unless they advise going direct. If you go direct, you should still touch base with the PR office. Never let them feel you are "scooping" them in delivering a story without their knowledge.

Campus literature, such as brochures welcoming persons to the campus, may feature Cooperative Education. Cooperative Education information is highly welcomed by high school guidance offices in recruiting literature--many write and ask for more. And these counselors need to be kept well-informed because their support may well have a sufficient impact on your Cooperative Education Program.

The campus press may be used by working with student journalists writing feature stories as well as the "hotter" news. Cooperative Education always has an unusual story to tell, unusual pictures, etc., for the student newspaper and the yearbook.

Newsletters and bulletins sent out by the institution, or the institution's fund raising branches, such as its Foundation or Alumni Association, are good outlets, also, and should not be neglected.

Recognition, Personal Contact and Special Promotions

Examples of other strategies include the following:

Cooperative Education provides another opportunity for the institution to single out employers, students faculty, and supervisors of employer organizations by recognition awards such as certificates of plaques. These in turn generate their own "news".

Informing Administrative Personnel: You should keep administrative personnel informed of your program and in turn ask them to let you know of changes that will drastically hit Cooperative Education in areas such as registration, housing policies, loan policies, use of university services such as the library, swimming pool, golf course, student center. A few cups of coffee with the "right" people is not time lost. Memos are good, but a newsletter is perhaps the best way to put your message on the line and to remind recipients that your program lives!

Earning Faculty Support: Keeping the faculty in the position of supporting a Cooperative program is critical. Their references to Cooperative Education in the classroom or in advising students in their offices can be a tremendous plus or MINUS. To keep their comments on the plus side, you should keep them informed of the Cooperative successes that come from their departments.

Special Days/Programs: Where time permits a one-day program, "Cooperative Education Day" on campus may have its value for both the institution and the cooperative program. Such programs can be most successful where employers are invited to spend the day on campus to share in the program along with Cooperative students and faculty as well as administrators. It gives the institution an opportunity to get a direct feeling from the employer as to the value of Cooperative Education, and perhaps a feeling for change, suggestions for improvement, and in turn a vote of confidence.

Alumni: Most students who enroll in Cooperative Education Programs, if the programs are quality programs, become loyal alumni. Many of these have found Cooperative Education to be their path to a college education--a degree--as well as a superior kind of an education. The value these alumni place on Cooperative Education is demonstrated by the large numbers of graduates who encourage their sons and daughters to go the Cooperative Education route to profit from this type of an educational experience. Many graduates via the Cooperative route eventually arrive at a position where they are the employers. So, you should keep in touch with these supporters of Cooperative Education. They may now be Cooperative employers.

Placement: An institution with a Cooperative Education Program has a distinct advantage in the operation of its Placement Office. As Donald Hunt told the 1964 CEA organization meeting, "An institution

with a quality Cooperative Education Program has little need for a placement office as most institutions think of it--placement is really taking place for more than 50% of the students at the sophomore level." And it is true that in many of the quality Cooperative Education Programs 55% to 60% (at some institutions the percentage is even higher) of the students take permanent jobs with the same employer where they were Cooperative student trainees.

Cooperative Students Themselves: Experience has proven that the Cooperative student is an ambassador of good will both for the employer and for the institution. When a well qualified Cooperative student is assigned to an employer, he can take the message of the institution direct to the employer. Of course, the reverse holds true as well; the Cooperative student can be an excellent ambassador of good will for the employer when the student is back on campus.

SEEKING AND EVALUATING FEEDBACK: A promotional effort without feedback is relatively useless. We need assessments of the impacts of our efforts to determine whether the strategies used were effective in enabling us to achieve our objectives and whether certain strategies should be continued. Feedback devices may include: questionnaires, personal letters requesting reaction and personal contacts asking for suggestions.

A PARTING WORD: In this day when funding is in short supply, when education is being reviewed and surveyed from all angles, it is good to be able to promote a product that is readily acceptable by employers, parents, and most students. Most people still look at the work ethic as being "a good thing". Cooperative Education, therefore, is "in" today and easier to promote than ever before.

PART VII. TRENDS, WISDOM, AND INFORMATION

Evaluation of Cooperative Education Programs

DONALD C. HUNT - University of Detroit and
GEORGE H. MILLER - University of South Florida - 1977

Until recent years few cooperative education programs, if any, were faced with the question of accountability. As educational dollars became in short supply in the early 1970s, many administrations of institutions of higher education began to take a look at their co-op programs and asked for accountability.

At this point directors of cooperative education programs began to ask consultant/evaluators to visit their programs for the purpose of an "evaluation" of the program and its operation, costs and service to students, with a look at its value to the total educational process of the institution.

Few persons would accept such an assignment as there were no guidelines and it was always a case of building an evaluation procedure from scratch.

It was then that Donald C. Hunt, director of the Midwest Center for Cooperative Education and director of Coordination and Placement, University of Detroit, and George H. Miller, director of the Southeastern Center for Cooperative Education, University of South Florida, roughed out a guideline for evaluating a cooperative education program. At about the same time, Dr. James W. Wilson, director of the Cooperative Education Research Center, Northeastern University, designed similar guides for evaluation. These sets of guidelines have all been updated in recent revisions.

These guidelines, both the Hunt-Miller and Wilson versions, have been tested by the Southeastern Center for Cooperative Education in both workshops at the Center and in on-site evaluations conducted by the Southeastern Center.

While the Southeastern Center was the first to hold a workshop for the specific purpose of having participants evaluate their own programs, other training centers have now moved in this direction. In late 1977, the Southeastern Center held a workshop for the sole purpose of preparing participants to be consultant-evaluators to those programs desiring an evaluation. The Center currently provides programs with a list of participants who have attended such workshops from which, if they choose, they may select a team for conducting an on-site evaluation.

Many leaders in the field of cooperative education believe that many evaluations conducted in recent years have been directed toward the wrong points, or at least did not cover many of the points that should have been covered. The concern Hunt and Miller have is over the evaluation of the student's activity in his or her position on the cooperative education assignment, rather than taking a look at the entire program.

To Hunt and Miller this is like looking at only one spoke in the wheel, when only the student's assignment is looked at or evaluated. They believe an evaluation should start with a look at the institutional policy on cooperative education, whether it is published, and to what degree this information is given distribution.

They would then look at whether cooperative education is an integral part of the educational program, the degree of faculty involvement, employers' involvement, and whether there is adequate support from the various administrative levels: Chairpersons, deans, chief academic officers, and president.

A look is then taken at the degree to which recognition is given the educational values of cooperative education, and the chain of communication between the cooperative education program and the various areas including: Students, faculty, administration, and employers. Is there an advisory committee or council of any kind and if so what is the makeup of its membership?

Next Hunt and Miller look at the budget and costs, and whether proper funding is given the director/coordinators to visit students on location and whether the coordinator/student load is realistic for the setting of the program.

Other items then touched on include: Space, career reference library, student handbook, training of staff including support personnel, and availability of campus services to students when they are away from campus such as financial aid, health services, sports activities, etc.

A look is taken at the method(s) of collecting and cataloging data to insure a running historical record of the program and how the program measures up to the original set of objectives established for it at its founding, the number of students who have entered the program, and how well the training positions serve the career objectives of the students.

Another measure of a viable program is the employers' retention rate of students upon graduation. Then a look goes at the activity of those at the institution in the professional organizations serving the cooperative education movement who are members and are then active in the organization(s).

Sandwiched in with a look at all the above points are interviews with students, faculty, employers, and administrators.

Hunt and Miller have a scoring formula on 25 specific points and thus rate a program from "Excellent" down to "Something is wrong" or "Program is in trouble", depending on whether the program is comparatively new (less than three years old) or one with more than a 3-year history.

With the rating sheet used in 1977 by the Office of Education in rating "Administration" grants in Cooperative Education having one point (XI) centered on evaluation, evaluation took on a new significance. Point XI read, "THE PROPOSAL PROVIDES FOR EVALUATING

CO-OP PROGRAM EFFECTIVENESS AND DETERMINING THE EXTENT TO WHICH PROGRAM OBJECTIVES ARE BEING ACCOMPLISHED." Scoring was on a one to four basis: 1) No evidence provided. 2) Minimal evidence provided. 3) Adequate evidence provided. 4) Excellent evidence provided. A new rating/scoring formula is expected in 1978, but evaluation is expected to carry some significance.

It is anticipated that most programs planning on additional Title VIII funding will thus be scheduling evaluations of their programs, not only to take a look at their program but to satisfy the readers of their future proposals.

In a matter of less than 30 days in the spring of 1977, one training center had requests for approximately 25 evaluation teams. There was no way it could meet this demand.

It thus seems that "Evaluation" will be a term much used in coming years in the field of cooperative education and the demand for consultant-evaluators will be heavy, especially toward the end of a funding year. Evaluations on an annual or bi-annual basis can, it is believed by many, provide a yardstick (or metric stick) for the measurement of the success or failure of a cooperative education program.

In later pages the reader will find a copy of the Hunt-Miller guideline for an evaluation. The individual calling for the evaluation should feel free to inject four or five of his or her own questions and delete a like amount if it is believed the change will better serve the purpose. It is believed an evaluation on-site should take a minimum of two days and in the contract with the evaluators the institution should require a final typewritten report within ten days of the on-site visit.

In giving the evaluators a list of students, a list of employers, and a list of faculty and administrators who may be contacted, the sample should be selected without bias and full addresses and phone numbers should be made available. Make it easy for the consultant-evaluator, not difficult, and they will accomplish more of value for the program.

On the following pages is the instrument which Hunt and Miller have developed as a guide to evaluation of a cooperative education program, using the following methods of scoring:

Score _____ Evaluation Rating _____

<u>After Three Years of Operation</u>		<u>One to Three Years of Operation</u>	
90 - 100	Excellent	85 - 100	Excellent
80 - 90	Good	70 - 85	Good
70 - 80	Fair	60 - 70	Fair
60 - 70	Needs improvement	50 - 60	Not progressing adequately
Below 60	Something is wrong	Below 50	Program is in trouble

COOPERATIVE EDUCATION PROGRAM EVALUATION FORM

Designed by Donald C. Hunt and George H. Miller

Name of Institution _____ Date Program Established _____

Evaluated by _____ Date _____

(Score all categories on a zero to four basis with zero indicating none or poor, and four indicating completely adequate, total, excellent, etc.)

1. Is there an Institutional policy on cooperative education? (All areas = 4)

None	Verbal	Written (Internally)	Published in the catalogue	Published in a student Handbook
------	--------	-------------------------	----------------------------------	---------------------------------------

2. For the colleges and curricula involved in cooperative education, is it an integral part of the educational program?

0	1	2	3	4
---	---	---	---	---

3. To what degree is the faculty involved in the cooperative education program?

0	1	2	3	4
---	---	---	---	---

4. Do employers participate in the cooperative program as advisors, consultants, or resource persons?

0	1	2	3	4
---	---	---	---	---

5. Is there adequate administrative support from the following: (All areas = 4)

None	Department Chairman	Deans	Chief Academic Officer	President
------	------------------------	-------	------------------------------	-----------

6. By academic credit or other means, is there adequate recognition of the educational values of cooperative education?

0	1	2	3	4
---	---	---	---	---

7. Is there adequate communication between the cooperative education department and the following: (All areas = 4)

None	Students	Faculty	Administrators	Employers
------	----------	---------	----------------	-----------

8. If there is an advisory committee for cooperative education, does it include representation from the following: (All areas = 4)

None	Co-op Staff	Faculty	Employers	Administration
------	-------------	---------	-----------	----------------

9. Have the institutional costs for the operation of the cooperative education program been determined for the following: (All areas = 4)

None	Clerical and Software	Professional Staff	Travel	Space and Equipment
------	--------------------------	-----------------------	--------	------------------------

10. Does the current budget sufficiently support the items in No. 9?

0	1	2	3	4
---	---	---	---	---

11. Is there adequate time and funds available for coordinators to visit students on the job?

0	1	2	3	4
---	---	---	---	---

12. Has a realistic load based on the ratio of student/coordinator and student/clerical staff been established in order to determine personnel needed?
- 0 1 2 3 4
13. Are space facilities adequate?
- 0 1 2 3 4
14. Is the location of the office convenient to students?
- 0 1 2 3 4
15. Is the career reference library adequate?
- 0 1 2 3 4
16. Is the student handbook adequate for guiding students so as to insure that they understand the program requirements?
- 0 1 2 3 4
17. Does the professional staff have adequate training, experience, and interest necessary for effectively operating the program?
- 0 1 2 3 4
18. Are financial aids, libraries, health services, sports activities, etc., available to cooperative students when they are on cooperative training assignments?
- 0 1 2 3 4
19. Is there an adequate method of collecting and cataloging data on a periodic basis to insure a running historical record of the program?
- 0 1 2 3 4
20. Was there a reasonable set of objectives established when the program was started?
- 0 1 2 3 4
21. Has the number of students entering the cooperative program since the program was started been reasonable in terms of the original objectives?
- 0 1 2 3 4
22. How well do the training positions serve the career objectives of the cooperative students?
- 0 1 2 3 4
23. As a measure of a viable program, is the employers' retention rate of cooperative students after graduation adequate?
- 0 1 2 3 4
24. Do any of the following hold membership in the Cooperative Education Association, the Society for Field Experience Education, the Cooperative Education Division of the American Society for Engineering Education, the National Commission for Cooperative Education? (All areas = 4)
- None Institutional College Faculty Coordinators
25. Evaluator's evaluation of the success of the cooperative education program.
- 0 1 2 3 4

Placement by Computer at the University of Waterloo

RAYMOND J. WIESER - University of Waterloo - 1977

The University of Waterloo was established in 1957 with the enrollment of 7¹/₂ Engineering students in the first co-op program in Canada. Today it is the largest Engineering school in Canada, and Co-op is mandatory for all 2,800 undergraduate Engineering and Architectural students. The optional cooperative programs in chemistry, physics, geology, kinesiology, recreation, geography, english, economics, and mathematics. Of these, mathematics is the largest with approximately 1,900 students in co-op.

Since 1964, the computer has been used in the co-op placement process. The program has, in fact, been obsolete for many years, but because it continues to perform reasonably well, reprogramming has not been scheduled to take place until after the department's entire records and information system has been computerized. This major conversion is underway, but currently is behind schedule and not likely to be completed until 1979 or 1980. A description of the system as it now exists follows:

THE INTERVIEW PROCESS

Depending on size, each program has a specified period of from five to twelve days duration, mid-way through each term, when new students and upper year students who are changing employers have interviews with prospective employers for work the following term. Employers are encouraged to come to campus for this activity. However, there are occasionally some, usually from distant locations, who ask the Co-ordinator to interview on their behalf. We have sixty interview rooms available and are usually able to honour the employer's first choice of date.

The interview process is initiated each term by mailing invitations addressed by labels produced from a computerized employer file. Approximately 4,000 invitations for all programs are mailed three times each year. Employers who require students respond by indicating their choice of date for their visit and provide us with a description of each job offered. Until recently the job descriptions were retyped and posted on bulletin boards. They now appear in a newspaper, grouped according to discipline and the assigned interview period. A copy of the newspaper is given to each student intending to take part in the interviews. Each student is also given ten data processing cards containing the student's name and identification number prepunched. Each student then makes a selection of up to ten firms that he or she wishes interviews with. Each position has been assigned a distinct number which the student marks on one of the cards with a mark sense pencil. The cards are returned to a collection area and the mark sense information is converted into punched card information which is then used to maintain a master file of current status of all employers and all students participating in this set of interviews.

A number of reports are prepared at this point; for example, the status of each job with the number and names of the students who have applied for that job. Another is a listing of all the students and the jobs for which they applied.

After the deadline for application, the resumés and "student record forms" of all students who have requested interviews are sent to the employer. The employer reviews the records and advises the department by telephone or letter the names of the applicants to be interviewed. Prescreening normally occurs with very popular jobs which attract large number of applications. Some students are deleted from several interviews and some do not use all of their cards, hence a typical student may end up with six or seven interviews.

Some jobs do not attract many applicants and some job descriptions arrive late, after the newspaper has been produced but before the interview period. These jobs are posted on bulletin boards and students are able to manually sign-up for these interviews, even if they have used up all of their cards. In these cases other cards must be prepared by the department and entered into the system.

We encourage the employers to begin with a thirty minute general group session for all of the students they will be seeing later individually. This usually occurs about nine o'clock in the morning, followed by the individual interviews at twenty minute intervals throughout the day.

Each student who attends an interview receives a pre-punched data processing card from the interviewer containing the employer's name, identification number and position number. Following all of his interviews, the student marks a sequential preference, i.e., 1, 2, 3, etc. on the employer cards he has collected, starting from his first choice of job to his last. At this stage, he has the option of rejecting up to two positions. These rejections are usually the result of sketchy job descriptions and the job is found to be other than expected during the interview with the employer. The number of rejections is small, and we have the student discuss the reasons for rejection with us.

Each employer provides the Department with a ranking of students in order of preference. Students who would not be employed under any circumstances are not listed. Some employers provide their rankings at the end of their interviewing, while others need several days to reach their decision. The latter occurs most frequently when an organization sends up a team of interviewers who must compare their selections before integrating their choices. In a few cases, a telephone call is required to solicit the outstanding choices.

It must be appreciated that while this information is being gathered, the employers have no idea as to how jobs are being ranked by the students, nor do the students have any firm idea of how they are being ranked by the employers. Occasionally someone will try to beat the system, more often an employer, but most realize that the honour system would collapse if the practice became widespread.

Until this stage of the process, all reports have been simple listings. The first report that follows the employer and student selection information is a "pre-placement" report which lists individually each job with the employer's ranking of each student interviewed. It also shows the student's ranking of the job. The combination of these rankings gives what is called total weight for each student/job combination. In order to break ties, an employer's ranking is multiplied by eleven and a student's ranking by ten. Hence, a 1 to 1 match results in 21 being the lowest combination. The next best combination is 31, when an employer ranks a student first and that student ranks the job second. The third best combination is 32, and so on.

A companion report lists the students alphabetically, showing the corresponding employers each student applied to interview, actually interviewed, and how the student ranked and was ranked. The staff use these reports to check for errors, which are easily corrected before the final placement program is run. It should be noted that specific ranking information is kept confidential.

THE PLACEMENT REPORT

After the "prep report" has been checked for errors, the final placement program is requested. This final program yields five reports. The first is an alphabetical-by-student placement list, showing each student and the employer with whom he or she has been placed, the student's preference number for this job, and the employer's preference number of this student. The second report is similar but alphabetical by employer name. The third is a list of employers with unfilled positions, showing the number of original positions, the number filled and finally, the number remaining to be filled. The fourth report lists all students who are not placed, and the fifth report summarizes all the information in statistical form.

Past experience has shown that 10% to 25% of the students remain to be placed following this procedure. Regardless of the number of positions offered vs. the number of students, there are always some jobs which are not filled and some students not placed. Among the unplaced students are those who were rated quite highly by several employers, but these firms managed to attain their first or second choice. There are also some students who were either unrated or rated very low by all of the employer interviewers.

THE UNFILLED POSITIONS

The next step is for the Co-ordinators to attempt to place the remaining students in the positions that are still unfilled. Some employers will return to campus to interview students not seen the first time. Others will reconsider students they initially did not rank; however, there are always some employers who will not accept someone they feel is "left over". The remaining students are usually placed in jobs that become available after this process is complete.

ACCEPTANCE OF THE SYSTEM

Acceptance of the system by the students and employers has been very favourable. Students appreciate the degree of freedom and competition inherent in the system and employers appreciate its simplicity and fairness. Results of placements over the years show a remarkable consistency. Typically, over 90% of the students who were placed by the computer receive one of their first four choices and over 90% of the employers receive one of their first four choices.

Federal Funding

JOHN L. CHASE - U. S. Office of Education - 1977

In the evolution of the Federal Government's policy toward Cooperative Education, the year 1976-77 stands out as a year of transition. Particularly noteworthy are these aspects of the transition: the political change from one administration to another as a result of the 1976 elections; the legislative restructuring of the program in the Education Amendments of 1976; and internal organizational changes in the U.S. Office of Education where the Federal program is administered.

An immediate consequence of the presidential election was an increase in funds requested by the Executive Branch for the Co-op program. Since 1973, appropriations for the Title IV-D program had equalled the authorized ceiling of \$10.75 million. For 1977, however, the previous administration sought a reduction of about one third, to \$8 million, which would have effectively eliminated all grants for training and research as well as reduced the amount available for the support of administration. The Congress, which had already completed action on the legislative changes, approved a moderately larger appropriation than the previous one, of \$12.25 million.

With the new administration came a number of new high-level appointments: a new Secretary, a new Commissioner of Education, and numerous other high level officials down to the Deputy Commissioners in charge of Bureaus. The collective judgment of these individuals on their educational priorities will become evident when the fiscal year 1979 budget goes to the Congress in January. We can only hope that, in the articulation of goals which encompass the whole range of national concerns, the high educational and social value of the Cooperative Education program will be given the attention it deserves.

A second major phase of the transition is the replacement of Title IV-D by Title VIII of the Higher Education Act as the authorizing legislation (Public Law 94-482). In effect, the program has been substantially restructured. The authorization has been extended through 1982--an unusual mark of strong Congressional

support. Higher dollar ceilings have been approved for both the administration and the training/research parts of the program. The maximum amount of grants to individual institutions has been lifted to \$175,000. Finally, the definition of eligible programs has been modified by dropping the words "full-time". Alternating periods of study and work are still required, but these may be half-days, full days, weeks, months, quarters, semesters, or any other period that makes academic sense.

The results of the 1977 competition for funds can be briefly summarized. Of the 652 valid applications received, 602 (522 in FY '76) were for the support of administration; 25 each were for training (44 last year) and for research and demonstration (27 last year). In dollar terms, the administration requests totalled \$33,324,218 (\$22,995,059 last year); the training requests \$1,694,457 (\$1,830,974 last year); and research/demonstration \$1,387,312 (\$612,601 last year).

A total of 267 applications was approved for funding. These included 247 grants for administration to 276 different institutions, for a total of \$11,250,000 (compared to 266 grants for \$9,968,000 last year); 14 grants for training, totaling \$725,000 (compared to 15 for \$612,901 last year); and 5 awards for research, totaling \$275,000 (compared to 3 last year, for \$119,044). The previous total amount for training and research had been set by law at \$750,000; this year the total was not mandatory but was the result of the number and quality of proposals approved, and was \$1,000,000. The training and research grants of course represent an investment in the future, and they need to grow as the program itself grows.

A third phase of the transition had to do with internal O.E. structure, staffing and organization. This is a continuing process, and is probably not of great concern to the outside world. Nevertheless, it does affect staff morale, ease of communications, and the ability of the Branch to respond to external needs and demands. In mid-summer of '76 the Cooperative Education Section was made a Branch within the Division of Training and Facilities with the implication that more adequate staffing would be provided. On a higher level, the Division of Training and Facilities now is a part of and reports to the Deputy Commissioner for Higher and Continuing Education.

What about the future of the Federal program? The present authorization continues until 1982. Prior to any continuation beyond then, Congress will undoubtedly hold hearings to review progress achieved under the 1976 legislation and subsequent appropriations. To be prepared for that scrutiny, it seems that institutions should now set goals for achievement by 1981. Some possibilities readily suggest themselves: (1) A student participation in Co-op of at least 10% of the student body (nationally, Co-op enrollment is only 2% of total enrollment); (2) an extension of Co-op to the graduate and graduate/professional levels; and (3) at least a doubling in the number of institutions adopting Co-op on an institution-wide, mandatory basis. No doubt other feasible and desirable goals can be developed by each institution. The important point is that each institution seek to increase its

student participation, improve the quality of its program, and strengthen its institutional commitment. These results will only be achieved if planning for them begins now.

Within the limits of the resources made available by Congress and the Administration, the Branch will seek to support these institutional and national objectives.

Fifteen Years of the National Commission for Cooperative Education

ROY L. WOOLDRIDGE - Northeastern University - 1977

The widespread acceptance of cooperative education throughout both the higher education and secondary education establishments is obvious testimony that educators and administrators have identified this model of work and study as a prime reform necessary to meet a broad range of requirements. The new popularity of cooperative education is the latter-day realization that Dewey and Whitehead were right in their argument that theoretical knowledge is useless and quickly lost if it is not acquired in the context of practical experience. Leading educators and social scientists such as James Coleman, Christopher Jenks, Urie Brofenbrenner, Frank Newman, and Ralph Tyler have argued that cooperative education is not only the best way to gain realistic expectations about the world of work, but it also exposes students to a wide variety of job options, social classes, and age groups not otherwise encountered if they spend all of their time in the classroom.

With these and other ideological supports and with funding from the federal government, the cooperative education movement has mushroomed into a national phenomenon for which little or no prior preparation was made for the newly entering colleges to mount effective programs. The well-established institutions have benefited from a long period of trial and error, and down the years they have built well-trained staffs, adapted curricula and academic faculties to the cooperative concept, and effectively organized employer banks of companies and public-sector agencies eager to hire their students. With some notable exceptions, the newer programs are managed by untrained personnel, often working below the salary scale of other faculty members. Furthermore, these newly entered colleges have not managed, in many instances, to gain the approval and cooperation of academic faculties who characteristically resist efforts to dislodge them from fixed, inherited positions devoted largely to conventional modes of teaching. While it is not unexpected that new programs will face serious problems of growth from infancy to maturity, they do need help, nourishment, and guidance, not only to manage internal conflicts but also to flourish externally as the effective mechanism to achieve the national goal of melding study and work as a major social requirement for our time.

It is evident that for most of the newly entered colleges,

the success of their cooperative education programs will depend on their ability to attract and develop a competent professional staff to handle a variety of urgent issues and needs. These include the mobilization of large-scale employer participation; the development of a strong institutional commitment to program expansion from both the teaching faculty and the administration; and, the replacement of cooperative students during their off-campus periods with other students drawn from an increased student enrollment pool. Assistance in the professional development of these staff members is available from several sources including the National Commission for Cooperative Education.

During the past fifteen years the National Commission for Cooperative Education, a non-profit, tax-exempt organization directed by an active Board of Trustees and supported by a membership of over 300 institutions of higher learning and private-sector companies, has made extraordinary progress in advancing the cause of the cooperative education movement throughout the nation.

The Commission assists, guides, and counsels college faculty and administrators, corporations, business associations, and others interested and involved in the growth and development of cooperative education. Over the past two years a number of training programs have been developed by the Commission staff to assist in the professional development of faculty coordinators. Moreover, the Commission performs a number of administrative functions for the Cooperative Education Association and the Cooperative Education Division of the American Society for Engineering Education, the two professional societies in the field of cooperative education.

Its efforts have resulted in the enactment of supportive federal legislation, a dramatic expansion in the number and variety of educational institutions offering the cooperative plan of education, and its extension to thousands of students.

While the initial program development challenges have been met, a continuing effort is required to maintain these achievements, to modify and strengthen existing approaches, and to permit the expansion of the movement to benefit additional students, educational institutions, and employers.

The Cooperative Education Association

S. B. COLLINS - Executive Secretary - 1977

The Cooperative Education Association was formed on September 18, 1963 as a result of the interest of Donald C. Hunt of the University of Detroit and Frank H. Jakes of the Ford Motor Company who spearheaded the effort.

It was seen by them that cooperative education needed an organization that could share the needs of the entire gamut of academic disciplines. Until this time the only organization of persons

interested in cooperative education was represented by the Cooperative Education Division of the American Society for Engineering Education, which placed emphasis on the technical and engineering professions.

With Hunt and Jakes as co-chairmen of the steering committee, several functioning committees were formed to handle the details of organization. At 2:00 P.M., on September 18, 1963, in Detroit, Michigan, the steering committee was called to order for its first formal meeting and the Association came into being. Before the Detroit meeting was adjourned the framework for the Association's constitution was completed, a financial structure was developed, a publication pattern was programmed, and the first annual meeting was set for April, 1964, to be held at Dearborn, Michigan.

The Cooperative Education Association has grown to a current membership of 1200 persons, 80% college-based and 20% employer-based. It is open to membership to anyone who is interested in any aspect of cooperative education. Its present purpose is to associate all persons interested in cooperative education whose aims are to elevate the standards of cooperative education so that these programs will best serve the student and the employer, to obtain the best thinking on the many problems of this highly specialized field and to share such information, to promote a better understanding of the problems faced by those working with cooperative education, and to insure that cooperative education takes its rightful place in the circles of higher education.

Its publications to assist its membership are of high quality and consist of the Journal of Cooperative Education, issued twice per year, the Cooperative Education Newsletter, issued quarterly, the Directory of Colleges and Universities which offer cooperative programs issued every other year, and the Membership Directory issued every other year. All of these publications are free to current members.

One of the outstanding features of the Association is the sponsorship of an international annual meeting held in April. This meeting rotates between the five geographical districts which have been set up around the United States and Canada. This meeting not only features outstanding speakers but presents many workshops where the attendees participate in spirited discussions with informed leaders in the field.

Memberships are held in four classifications: Individual, Participating, Sustaining, and Student. The Sustaining Membership is proposed to be used principally by employers as evidence of their sustained interest in cooperative education and their willingness to support its future growth. The Participating Membership is proposed to be used as a college or university membership. The Individual Membership may be used by any person regardless of affiliation. Student Memberships are to be used by full-time students who are currently enrolled.

Administratively, the Association includes many ongoing committees which are continually examining the structure, problems and purposes of the organization. Such committees are Awards,

Budget, Constitutional Revision, Divisional, Goals, Membership, Nomination, Publications, Special Affairs, and Ways & Means.

Leading the organization is the Executive Committee which consists of a President, Executive Vice President, Vice President for Committees, Vice President for Programs, Secretary, Treasurer, Past President, and the Executive Secretary, ex-officio. The tenure for each position is one year except for that of the Executive Secretary.

We feel it is advantageous for anyone interested in the field of cooperative education to be a member of the Cooperative Education Association. The dues structure is reasonable and the services are many and beneficial. It is the only way to keep abreast of what is going on in the field and keep the practitioner alive and stimulated.

Applications for membership may be secured by writing to:

Cooperative Education Association
Drexel University
32nd & Chestnut Sts.
Philadelphia, PA 19104

V. A. Benefits for Cooperative Education

DAVID BROWN and PHILIP JACOB - Temple University - 1977

Veterans wishing to combine academic training and practical work experience can receive full-time education benefits for the work experience as well as for enrollment in academic courses, when the courses and work experience are formally a part of a cooperative course recognized by the school the veteran is attending.

The state approval agency, having jurisdiction over the enrolling school, must give its approval to the cooperative course, before veterans education benefits can be paid to a veteran in the role of a cooperative student. While the Veterans Administration does not participate in the decision-making process, its regulations suggest some of the questions the state approval agency will ask before granting approval to a cooperative program.

- Is the alternate in-school (institutional phase) period at least as long as the alternate period (work phase), in the business or industrial establishment?
- Has the program for which approval is sought been promoted as a cooperative program in the school catalogue or other literature of the school?
- Has the school insured that employment during the alternate periods will be available to cooperative students and that the

employment will be supervised as to content?

- Will completion of the on-the-job (alternate phase) portion of the program result in a determination by the school that the student has completed a part of the required work for a degree or diploma?

The work experience phase of each program must be viewed as supplementary to the in-school portion of the course and must bear a real and substantial relation to the academic courses being pursued by the student.

Every veteran participating in a state approved cooperative education program has the option of either accepting payment at the cooperative rate for both the work and institutional phases or receiving payment at the regular veterans rate, but only for the in-school periods. Once a veteran is certified as a cooperative student, he can begin with the institutional phase or the work phase, but he must complete both phases before again having the right to elect how future benefits will be paid.

Educational Rates

regular rate		co-op rate
\$ 292	single	\$ 235
\$ 347	one dependent	\$ 276
\$ 396	two dependents	\$ 313
+ \$ 24	each additional	+ \$ 18

A simple calculation of the above figures will show that over the 45 months of potential entitlement a single veteran receiving the regular institutional rate will receive \$13,140 while under the cooperative rate he or she would receive only \$10,575. What is the advantage of a cooperative student receiving benefits at the cooperative rate rather than at the full-time undergraduate (non-cooperative) rate since full-time non-cooperative students receive a higher monthly rate?

In order to determine whether there is an advantage in receiving cooperative rate benefits, one must ask in each individual case, what is the immediate financial need of the veteran? The principle advantage of the cooperative rate is that it is continuous. If the veteran requires a continuous payment during the work and institutional phases, then the cooperative rate should be used.

The amount of entitlement to veteran administration educational benefits accrued by a veteran must also be considered when evaluating the merits of cooperative rate benefits. Veterans who served on active duty for more than 180 continuous days (or were released with a service connected disability), any part of which occurred after January 31, 1955 but before January 1, 1977 accrued entitlement at the rate of 1-1/2 months per month of active duty. When the veteran served 18 months, benefits were fixed at a maximum 45 months. However, all veterans must use their benefits within 10 years of the day they are released from active duty.

The number of months entitlement a veteran has remaining and

the amount of time remaining in which to use this entitlement becomes very important in deciding whether to use cooperative rate benefits or not. If a veterans ten years time limit is running out, continuous payments through the cooperative rate may be best. If the veteran has a limited amount of entitlement remaining but years in which to use it, then the regular institutional rate may be of greater value to the veteran. Ultimately, the veterans final decision on which benefit to use will be based on a mixture of personal need and maximum use of his or her remaining benefits.

If a veteran with a service-connected disability has elected to receive Vocational Rehabilitation Benefits rather than GI Bill Benefits, the above considerations remain essentially unchanged. The educational rate of payment however would be changed as follows:

Vocational Rehabilitation Rates

regular rate		co-op rate
\$ 226	single	\$ 197
\$ 280	one dependent	\$ 238
\$ 329	two dependents	\$ 275
+ \$ 24	each additional	+ \$ 18

NOTE:

A single enrollment period cannot be divided into an institutional and a work phase under present regulations.

Example: This is an ordinary cycle for which co-op rates can be paid.

Sept. 8 - Dec. 20	Academic coursework
Jan. 19 - May 8	Work phase

Sept. 9 - Dec. 21	Academic coursework
etc.	

This sequence of scheduling does not qualify for payment of benefits at cooperative rates.

Jan. 19 - May 8	Academic coursework and on-the-job training.
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All of the above rates are those in force as of August 1, 1977. They are always subject to change through congressional action.

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